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## ERRATA.

PAGE

- 13, notes, line two, for 26 read 6, and for 128 read 162; line three, for 165 read 210.
- 17, notes, line one, for *casas* read *cosas*.
- 20, line thirty-four, after *quam quam*, insert *nobis*.
- 37, line thirty-one, for *erranty* read *errantry*.
- 50, line eleven of epigraph, after "*know of*," supply *the virtue of*; and in the note, for 2 read 5.
- 52, line six, for *virtu* read *vertu*.
- 54, line thirty, for *Chrysostum* read *Chrysostom*.
- 60, line one of epigraph, for  $\Omega$  read " $\Omega$ "
- 71, line three of Greek passage, for  $\alpha\breve{\tau}'$ — $\alpha\breve{\tau}'$  read  $\omicron\breve{\tau}'$ — $\omicron\breve{\tau}'$ .
- 75, line fifteen, for *cepit* read *coepit*.
- 76, line thirty-four, for *tobaci* read *tabaci*.
- 166, line fourteen, for *noise* read *nose*.
- N.B.—The accents have been unintentionally omitted in some of the Greek passages.



*To William Wright Esq  
with the Author's kind regards*

A

# COMMENTARY

ON

THE INFLUENCE

WHICH THE USE OF

# T O B A C C O ,

EXERTS ON THE HUMAN CONSTITUTION,

IN A SERIES OF LETTERS :

BY

(VOX E DESERTO,)

FRANCIS CAMPBELL, M.A., M.D.,

SUPERINTENDENT OF THE COLONIAL LUNATIC ASYLUM, TARBAN.

---

O little boke! thou art so unconning,  
How darst thou put thyself in prees for drede?  
It is wonder that thou wexest not rede,  
Sith that thou wost full lite who shall behold  
Thy rude langage full boistrously unfold.

CHAUCER

---

SYDNEY:

PUBLISHED AND SOLD BY ALL THE BOOKSELLERS,

1853.

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RBR  
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TO

ROBERT LOWE, ESQ., M.P.,

&c., &c., &c.,

THIS VOLUME

IS RESPECTFULLY DEDICATED

AS A

SMALL BUT SINCERE TRIBUTE OF ADMIRATION TO HIS

GENIUS, ELOQUENCE, AND LEARNING,

BY HIS OBEDIENT SERVANT,

THE AUTHOR.



## PREFACE.

---

THESE letters have no higher pretensions than what is expressed in the title page. They form a mere commentary on the effects, good and bad, which the use of tobacco produces in the human constitution. I have accordingly availed myself of the usual privileges of a commentator, and extracted from writers of every age such passages as appeared to me calculated to elucidate the various topics brought under consideration. Great pains have been taken with the citations, both to render them accurate and do justice to the authorities.

But while I flatter myself that I have not fallen into the grave error of borrowing the sentiments of any writer without giving him credit for the loan, it must be admitted that in consulting and studying not only the authors quoted, but hundreds of others, oversights of this kind may reasonably be expected. If the reader, therefore, should discover any opinion made use of without acknowledgment, he is earnestly entreated to ascribe the omission charitably to inattention. Perhaps I may excuse myself on the same grounds, and with the same apology offered by the learned

Jacobus Facciolatus—Quæres fortasse, quinam isti sint. \* \* \* Equidem non memini. Immo ne illud quidem memini, utrum ego id aliquando legerim, an audierim, an vero ipse ita olim cogitando conjecerim.<sup>1</sup>

Ordinary readers need be under no apprehension at the formidable array of passages from languages not in common use. The meaning of them is for the most part sufficiently implied in text to admit of their being passed over without loss. It would have been better no doubt if they had been formally translated, or only referred to as notes. But both time and inclination were wanting to make so material an innovation on the original letters of *VOX E. DESERTO*, which in this respect are left nearly in the state wherein they first appeared, when the writer was entirely unknown.

The short excursus on Cabbage was only thrown in on the spur of the thought by way of analogy; and the bundle of odds and ends entitled *HUMAN HABITS* seemed to flow naturally from the subject as a sort of moral ægis to protect youth against the contamination which forms the subject of the commentary; for the work is addressed to my sons in common with the other youths of Australia, and published in the sincere hope that it may be the means of tempering the insane rage for smoking, so epidemic in this colony.

<sup>1</sup> Jacobi Facciolati orationes et alia ad artem dicendi pertinentia. Patavii. A. 1774, Edita.—Epistola x., de T. Livii Patavinitate.



After exercising my profession for forty years, with no inconsiderable experience of the so-called diseases of the mind, I may be allowed without the imputation of egotism, to speak with some confidence on a habit which I am convinced has consigned thousands to the madhouse, and hundreds of thousands to the ever-rankling affliction of incurable diseases in the stomach and associated organs.

Hence, I considered it my imperative duty as a father, a physician, and a friend to the young, to warn them of the pernicious consequences of this abomination both as it affects the health and the purse. Having performed my share of a great social obligation I will not feel disappointed if my labour should prove in vain. When I reflect that the greatest geniuses have never yet been able to begin and finish in a single life-time any important revolution in Religion, Morals, Politics, or Literature, I can have no great cause to complain that my trifling efforts are not crowned with success.

It is not to be expected that a luxury which has successfully defied the thunders of the Vatican, the proscription of emperors, the interdiction of states, and the "counterblaste" of a king, would be much affected by any argument however forcible, or proof however convincing, I might bring against it. The taste for it is too deeply rooted and general for any single individual, or any single generation, to make one smoker less of

those who rejoice in imbibing the deleterious juices of this poison; which, being equally attainable by the rich and the poor, has entwined itself so inextricably among their habits as to have become one of their chief necessities. It is long since the impulse to reform was given in respect to this habit, and if succeeding generations continue the momentum, it is to be hoped the force of oft-repeated appeals to the common sense of mankind shall at length complete the change. The continual dropping of water hollows out the rock.—*πέτρην κοιλάει ράνις ὕδατος ἐνδελεχής*.<sup>1</sup>

But though these pages are consecrated to the welfare of youth in particular, it would not be surprising if some reader of a shrewd and penetrating temper of mind should cunningly deduce from the nature of the work that it aims at older and better informed heads than at boys, adding force and charm to his inference by asking—

————— Who but rather turns  
To Heaven's broad fire his unconstrained view,  
Than to the glimmering of a waxen flame?  
Who that from Alpine heights, his laboring eye  
Shoots round the wide horizon, to survey  
Nilus or Ganges rolling his bright wave  
Through mountains, plains, through empires black with shade  
And continents of sand; will turn his gaze,  
To mark the wanderings of a scanty rill  
That murmurs at his feet?

AKENSIDE.

Doubtless there would be great probability in the conjecture, although the "scanty rill" is

<sup>1</sup> Choerilus, apud Galen. de Temper, lib. III. 4.

indeed the prominent feature in the landscape ; but he might reduce this probability to absolute certainty if, without soaring into the sublimities of poetry, he would proceed on plain ground, and argue that the influence of morals descends from the upper to the lower classes of society, and from the older to the younger, by a law as determinate as that which directs the gravitation of bodies to the centre ; that the humbler orders not only imitate the good and the bad examples set them by the higher, but even vie with them in their follies and absurdities through every grade from the base to the summit ; and that the younger members of each extreme, ape the obliquities of their seniors with a degree of success which completely throws the elders into the shade. Ergo, higher game is aimed at than boys.

For none will deny that these propositions involve universal truths, because in Baconian phrase *asundunt ad axiomata, et descendunt ad opera*.—But whether the question be man or boy, I may venture to predicate of the work, that no one, old or young, will be the worse of giving it a careful consideration.

Æque pauperibus prodest, locupletibus æque ;  
Et, neglecta, æque pueribus, senibusque nocebit.  
HORACE.

It is thirteen years since these letters, as they were originally written, appeared in the columns of the *Sydney Herald* ; and though they are revised and somewhat enlarged, they are still

disfigured with the blemishes arising from the hurry and carelessness of style peculiar to articles intended only for ephemeral reading in a daily journal. But they were neither written then, nor are they published now, with a view to pecuniary advantage. The composition of them at first beguiled many a melancholy hour, and consoled me in circumstances the most trying to human fortitude ; and latterly the correction of them was undertaken in the hours devoted to repose as a salutary and effectual means of recruiting and re-composing my spirits, harassed and agitated by the exhausting and mind-wearing duties of the day, in the exercise of the most arduous branch of the HEALING ART. In short, homely and vulgar as the task may be considered, “ it has soothed my afflictions ; it has multiplied and refined my enjoyments ; it has endeared solitude ; and it has given me the habit of wishing to discover the good and the beautiful in all that meets and surrounds me.”<sup>1</sup>

<sup>1</sup> Coleridge.

Lunatic Asylum, Tarban,  
September, 1853.

## LETTER I.

The Indian weed, unknown to ancient times,  
Nature's choice gift, whose acrimonious fume  
Extracts superfluous juices, and refines  
The blood distempered, from its noxious salts ;  
Friend to the spirits, which with vapours bland  
It gently mitigates ; companion fit  
Of pleantry and wine ; not to the bards  
Unfriendly, when they to the vocal shell  
Warble melodious their well-labored song.

J, PHILLIPS.

NICOTIANA TABACUM.—The tobacco plant,<sup>1</sup> including all its species and varieties, of which there are several, is a viscid herb, annual, a native of America ; but now cultivated extensively all over the globe. The species most in use are the following :—*Nicotiana Rustica*, the Yetle of the ancient Mexicans, the most abundantly cultivated in Europe, and of which the Syrian, Turkish, Salonican, and Latakian tobaccos are made. Gerard in his "*Herbale*," *at the word*, says "the English-grown tobacco (the *N. Rustica*) is as good as the American ;" but he adds, "it is not so thought nor received of our Tabakians ; for according to the English proverbe—Far fetcht and deere bought is best for the ladeys." *N. Paniculata*, *N. Glutinosa*, *N. Loxensis*, *N. Andicola*, as its name implies, found growing on the Andes at

<sup>1</sup> NICOTIANA. NAT. ORD. *Luridæ*, Lin. SOLANÆÆ, Juss. *Sex. Syst.* PENTANDRIA, MONOGYNIA.

GEN. CHAR. *Calyx*, urceolate, five-cleft. *Corolla*, funnel-shaped, five-cleft, regular, border plaited. *Stamens*, five, inclined. *Stigma*, emarginate. *Capsules*, two-valved, two-celled.

SPEC. CHAR. *Leaves*, oblong-lanceolate, sessile, acuminate, the lower decurrent. *Segments* of the *Corolla* acute. Throat of the *Corolla* inflate-ventricose.

the height of 11,000 feet. *N. Repanda*, the species from which the celebrated Havannah cigars are manufactured; it was introduced into England about the year 1823. *N. Quadrivalvis*, from which it is reported the Indians of the Rocky Mountains prepare their tobacco. *N. Tabacum*, the most important to English smokers and the English Government; and lastly the *N. Persica*, of which the far-famed fragrant and delicious tobacco of Schiraz is made. This, says the Rev. Dr. Walsh, is one of the most indispensable of Turkish luxuries. It is always the companion of coffee, and there is something so exceedingly congenial in the properties of both, that nature seems to have intended them for inseparable associates. We do not know how to use tobacco in this country; but defile and deteriorate it with malt liquor. When used with coffee, after the Turkish fashion, it is singularly grateful to the taste, and refreshing to the spirits, counteracting the effects of fatigue, and appeasing the cravings of hunger.<sup>1</sup>

This species, and its variety, the *N. Macrophylla*, flower in July and August. The root is branching, fibrous; the stem from four to six feet in height, erect, branching at the top, round and hairy; the leaves are numerous and large, being from two to three feet long, and four to six inches wide, sessile, alternate, entire, pointed, slightly decurrent, pale green, and glandular, with short hairs. The flowers are in large panicles at the end of the stem and branches. The bractes are long, linear-pointed at the base of each division. The calyx hairy, bell-shaped, somewhat pentangular, and cleft into five acute, erect segments. The corolla is rose-coloured, its tube twice the length of the calyx, of a pale green hue, and swelling into an oblong cup, which expands into

<sup>1</sup> *Narrative of a Journey from Constantinople, &c., p. 4.*

five pointed, plaited segments. The stamens are of equal length with the tube of the corolla. The anthers awl-shaped, compressed, and oblong. The style is slender, and the length of the corolla, The stigma is capitate, slightly cleft, rising from a conical germen, which changes to an ovate capsule, opening crosswise at the apex, and containing numerous small kidney-shaped seeds, of which each capsule contains about 1000; so that a whole plant will produce on an average 350,000 seeds. The Virginia tobacco, when in flower, is one of the most beautiful plants on the globe.

Pallas, the celebrated traveller and naturalist, assumes, and seems to consider he has proved, that "in Asia, and especially in China, the use of Tobacco for smoking is more ancient than the discovery of the New World."

A witty author<sup>1</sup> of the seventeenth century, writes to a correspondent, in "merry pin" and some sarcastic truth, that "an acre of performance is worth the whole land of promise." In the same vein it may be maintained that one fact is worth an entire bibliothéke of assumptions. Pallas might as well tell us that a cigar and a cup of coffee constituted the soothing anodyne with which the "Argive Helen" treated her guests, and threw a sweet oblivion over their sorrowful remembrances:—

Νηπενθές τ' ἄχολόν τε, κακῶν ἐπίληθον ἀπάντων.<sup>2</sup>

This is not the place to cite or discuss what Pallas proposes as his proofs; since from the established facts of the case compared with all he has written on the subject, it is manifest that the reasons for adhering to the opinion generally entertained at present, rest on far more solid grounds than any he has adduced. The common and well-founded belief is, that America is both the

<sup>1</sup> James Howell.    <sup>2</sup> Odyss, iv., 224.

native country of tobacco, and the source of the universal custom of smoking ; which after being introduced into Europe, was propagated thence over the rest of the Old World.

The names alone by which it is known in several countries of Asia, are clearly of American extraction ; and are of themselves invincible arguments against those of Pallas. For example, *Tambracco*, in the Malay language ; *Tambrooko*, in the Javanese ; *Tambacu*, in the Hindostanee ; and *Tamracoota* in the Sanscrit, are so strikingly analogous to *Tabaco* as to leave no doubt respecting the parentage both of these names and of the plant itself. New importations generally carry their names along them, and are adopted with only such idiomatic modifications as are prescribed by the genius of the language into which they are introduced. There is hardly a known tongue in which interchanges of this kind are not conspicuous. They may be seen even in the earliest Hebrew records, naturalised from the Sanscrit. I have endeavoured however to arrive at the truth, by attempting to trace the practice of smoking tobacco to a higher antiquity in the Old World than the discovery of America. And to this end, every record accessible to me has been diligently examined, to detect if possible the faintest analogy to this singular custom. But, as will be seen below, I have been unsuccessful in finding a single allusion to tobacco in any form, or for any purpose

In ancient medical works indeed, we frequently find the smoke of burning herbs recommended to be inhaled into the lungs through tubes or funnels, as a remedy for bronchial affections ; but not a word of smoking as a custom, not a trace of tobacco as a plant or a luxury is to be found.

Passing over the burnt offerings, &c., of Holy Scripture, Herodotus is the earliest author who



refers to the inhaling of smoke or perfume from burning plants. Two instances only are mentioned, one of which appears to have formed part of a religious ceremony ; the other is a meagre description of a medicated Scythian vapour bath. So that if any analogy to smoking can be discovered in them it consists only in the accident of their effects on the brain and nervous system. He says, speaking of the Massagetæ inhabiting the islands of the Araxes, "these islanders have trees bearing a fruit which produces such effects as the following—*Καρπούς τοιούσδε*. Having assembled together, they kindle a fire, and sitting down around it, they throw this fruit into the flame, and as it burns they inhale the odour and become intoxicated with its perfume, in the same degree as the Greeks with drinking wine ; the more they throw in, the more they become inebriated, until at length they leap, dance, and sing.

In another place where he treats of the manners of the Scythians, he describes an excellent custom observed by these people, which appears to have exerted similar effects on the nervous system. "They form," he says, "a conical tent by fixing three poles in the ground with the upper ends inclining towards each other, and spread (sheets of) felt over them as closely as possible : when the tent is completely covered in, they throw red hot stones into the enclosed space, and then take the seed of a large species of hemp which grows there, and insinuating it under the felt into the enclosure, they throw it on the burning stones. When the seeds begin to roast, such a steam is emitted as no Grecian vapour-bath surpasses. The Scythians howl with delight while they enjoy this luxury, which also serves them instead of ablution with water.<sup>2</sup>

<sup>1</sup> Clio. ccii. <sup>2</sup> Melpomene lxxiii., et seq.

Strabo also states that the Scythians smoked the fumes of burning herbs through wooden and earthen tubes.<sup>1</sup> Pliny, treating of the virtues of coltsfoot, says, "hujus aridæ cum radice fumus per arundinem haustus et devoratus veterem sanare dicitur tussem."<sup>2</sup> So far the ancient historians. The physicians explain the objects of this practice.

Diocorides in describing the sanative properties of βήχιον or coltsfoot, says the smoke of burning coltsfoot inhaled through a funnel into the lungs cures those who are troubled with dry cough, &c.<sup>3</sup> Marcellus Empiricus describes how this process is conducted. A tube is to be inserted into a new pipkin, (ollam) in which the dried herb and some burning coals have been enclosed: the steam and smoke (humor et fumus) are to be inhaled by the mouth until they penetrate the lungs and stomach.<sup>4</sup> Galen briefly notices the application of the smoke of coltsfoot to the lungs for the relief of cough, but says nothing of a tube.<sup>5</sup> Alexander Trallianus has half-a-dozen different ὑποκαπνισματα or formulæ for the cure of chronic cough, by inhaling the smoke of burning ingredients into the lungs, in one or two of which we are rather startled to find the red sulphuret of arsenic. But to be brief with this enquiry, consult for yourselves Pliny,<sup>7</sup> Cœlius Aurelianus<sup>8</sup> the psuedo-Dioscorides,<sup>9</sup> Nicolaus Myrepsus,<sup>10</sup>

<sup>1</sup> Geog., lib. 7.

<sup>2</sup> Nat. Hist., lib. xxvi., cap. 16 and 79.

<sup>3</sup> Lib. iii., cap. 109. and lib. v., cap. 81, where he states that the fumes of the red sulphuret of arsenic *σανδαράκη*, burnt along with resin, and inhaled through a tube, relieves chronic cough.

<sup>4</sup> De Med., cap. 16.

<sup>5</sup> De fac. Simp. Med., lib. vi., in vocem βήχιον.

<sup>6</sup> Lib v., cap. 4.

<sup>7</sup> Nat. Hist. lib., xxiv, cap. 35.

<sup>8</sup> Morb. Chron., lib. ii., cap. 7, 8.

<sup>9</sup> Euporist, ii. 3.

<sup>10</sup> Sect xli., 76.

Aetius,<sup>1</sup> Paulus Ægineta,<sup>2</sup> with the two Arabians, Johannes Serapio<sup>3</sup> and Rhasis:<sup>4</sup> all these authors mention this mode of applying remedies in bronchial complaints, but for no other use or purpose whatever.

Now if we are credulously to receive these as examples of smoking in the modern acceptation of the term, it must be admitted that the ancients carried the habit to the utmost limits of burlesque and absurdity; for they not only enjoyed the incense of the pipe themselves, but taught their horses, mules, and asses—mulorum, equorum, asinorumque genus omne—to blow a cloud occasionally for the benefit of their health. Vegetius, treating of the coughs to which these domestic animals are subject, proceeds thus :—"Istis quoque suffimentis non minus, quam potionibus, adjuvabis : Sandarici uncias tres, asphalti uncias tres ; alli et ceparum uncias tres, quæ cum pariter triveris, in tres partes equaliter divides, et per triduum cooperto ori vel capiti subjectis carbonibus, suffumiges, ut odor impleat nares, &c.,"<sup>5</sup>

Such are all the data that I can find, either ancient or modern, from which I believe Pallas, Rumph, Loureiro, and Thorius, have drawn their conclusions concerning the antiquity of smoking tobacco.

This herb has been fortunate in the number of its appellations, most of them conferred whilst the enthusiasm attending its introduction into Europe was operating like its own inebriating fumes upon the brains of its frantic devotees. Tabacum and pætum are native names latinised ; hyoscyamus

<sup>1</sup> Lib. Med. lib. viii., 61.

<sup>2</sup> Lib. iii., 28 and 29.

<sup>3</sup> Tr. ii., 19.

<sup>4</sup> Continens, viii.

Mulomedicina, lib. iii., cap. 67.

Peruvianus, or *henbane* of Peru, which Shakspeare has metathesed into *hebenon* ;<sup>1</sup> *sacra harba, sancta herba, sana sancta indorum* ; *herbe du Grand Prieur* ; *Herbe sacrié* ; *Herbe a la Reine* ; *Regina* ; *Herbe de St. Croix* ; *Herbe propre a tous maux* ; and among the Italians, *Torna-bona*.<sup>2</sup> It is now best known, however, by some modification of the Haitian name *tabac*, a word whose strict definition seems to have puzzled every writer on the subject from the conquest of Mexico till the present time. Its generic name *Nicotiana* was bestowed upon the plant by Linnæus, in compliance with a custom among botanists, who on such occasions are not always guided by the principles of strict justice or discretion. *Nicotiana appellata est a Johanne Nicotio, Regis Galliarum legato in Lusitania, anno 1559, qui primus hanc plantam Galliis transmisit*,<sup>3</sup>

By this act of the great botanist, a monument has been consecrated to another, which was due to Columbus alone. *Vos non vobis*. But if neither the grandeur and importance of his discovery, nor the humbler merit of having first brought this weed and its use into notice, was considered sufficient to entitle him to this honor, then it devolved by right on the Spanish hermit Roman Panè, who discovered tobacco in Haiti only a few years after the occupation of that island by his countrymen ; and if Roman Panè's title to the distinction was also to be quashed, surely Gonsalvo's claim was indisputable, who witnessed the smoking of it in Yucatan in the year 1518 ; and lastly, but precedent to any other claimant of his age, the name of Hernandez de Toledo, who introduced it into Europe, ought to have been identified with that of the poison.

<sup>1</sup> Hamlet, a. 1, s. 5

<sup>2</sup> Flora Domestica, *at the word*.

<sup>3</sup> Chrysostom Magnenus, *Exercitationes de Tabaco*.

It has hitherto been said and regretted, that the ingratitude or indifference of his contemporaries had shorn Columbus of every ray of his glory. It is true, indeed, that the scene of his fame was defrauded of its greatest prerogative and proudest title when Columbia was supplanted by America. But history is his proper monument, and the vast amplitude of the New World the solid basis on which it rests. Can the most aspiring ambition or insatiable love of glory, covet a grander or more imperishable memorial?

At the epoch of the discovery of the New World, this plant had been cultivated from time immemorial by all the original nations of the Oroonoko, and in several of the West India Islands; and the smoking and chewing of the dried herb had evidently been a long established custom, probably over the whole of the American continent.<sup>1</sup> Jacques Cartier found it in common use as far north as Canada. In a voyage he made thither in 1535, he says the inhabitants of Canada have likewise a certain kind of herb, of which they lay up a store every summer, having first dried it in the sun. This is only used by the men, who always carry some of it in a small skin bag hanging from their necks, in which they also carry a hollow piece of stone or wood like a pipe. When they use this herb they bruise it to powder, which they put into one end of the before-mentioned pipe, and lay a small live coal upon it, after which they smoke so long at the other end that they fill their bodies full of smoke, till it comes out of their mouths and nostrils as if from the chimney of a fire-place.<sup>2</sup>

See Humboldt's *Personal Narrative*, vol. v., page 666. Hakluyt's *Voyages*, vol. iii., p. 335. Herrera, *Descripcion de las Indias Occidentales*, vol. 1., p. 24.

<sup>2</sup> Bib. Univers des Voyages, vi., 15.

When Columbus discovered Cuba in 1492, imagining he had arrived at the island of Japan, the Golden Zipangu of Marco Polo, he dispatched two men into the interior on a mission to the Khan of this El Dorado, the fondest and most fallacious of all his hopes. The mission of course failed: a whole continent and the wide unbroken expanse of the North Pacific Ocean lay between them and Cipango. When the men returned to the ships, in relating what they had seen on their journey, they mentioned the surprise they felt at meeting the natives carrying about burning sticks in their hands to light fires "and fumigate themselves with the smoke of certain dried herbs," which they rolled into a leaf, one end of which they put into their mouths, and lighting the other, they continued inhaling and puffing out the smoke.<sup>1</sup> Again on the 4th February, 1503, says Don Fernando Colon, writing the history of his father—this Cazique and his chief men never ceased putting a dry herb into their mouths, which they chewed, and sometimes they took a sort of powder, which they carried along with that herb, which singular custom astonished our people very much.<sup>2</sup> In several islands Columbus, and afterwards Vespucci, found the natives chewing this herb, as at Long Island and Cat Island, which Vespucci says they did as a substitute for water, of which there was great want.<sup>3</sup> Jacques Cartier relates that the Canadians smoked and chewed to keep themselves warm.<sup>4</sup> Twenty-six years after the first voyage of Columbus, that is, in 1518, Gonzalvo saw tobacco smoked by the Cazique of

<sup>1</sup> *Historia del Almirante*, cap. 27. Herrera, *op. et. loc. cit.* W. Irving's *Life and Voyages of Columbus*, vol. 1, p. 281. Grinæus, *Novus Orbis*, p. 87. *Mundo Nuovo*, &c., &c., da Alberico Vesputio Florentino. *Vicenza*, 1507.

<sup>2</sup> *u. s.* and all the last quoted works.

<sup>3</sup> *Mundo Nuovo*, &c., &c., *Voyages of Discovery*.

<sup>4</sup> *Loc. cit.*

Tobasco during their interview; and in 1519, when Cortez took possession of Yucatan and Mexico, he found the inhabitants using tobacco in the same way as the natives of Cuba. The Emperor Motecusuma was in the habit of enjoying the luxury after breakfast and dinner, for the purpose of inducing sleep, a practice still followed by the natives of most of the provinces of South America. Even at the present day the Tamanoes and Maypures of Guayana continue to wrap maize leaves round their cigars, as the Mexicans did at the arrival of Cortez.<sup>1</sup>

But the Caciques and grandees at the court of Motecusuma were not content with the simple satisfaction of blowing a cloud like reasonable smokers by idly inhaling and exhaling the fumes, and confining their utmost range of pleasure to the region of the mouth. Habit blunts the edge of sensibility; and thus long practice of the same mode had exhausted all their power of enjoyment. The luxurious children of the sun, sated with the simple old-fashioned Aztek manner of enjoying the pleasures of the pipe, are represented to have made such innovations on the ancient laws of smoking a cigar as enabled them to carry their fruition of this precious incense to an extent which I believe is not ventured upon by the most zealous of our modern fumebibbers. They held the cigar with one hand, while with the other they closed the nostrils to enable them to swallow the smoke with more freedom and satisfaction.<sup>2</sup> Now this appears to be a practice so contrary to nature and common sense as to render the report at least doubtful. For if it were possible to admit the acrid fumes of tobacco into

<sup>1</sup> Bernal Diaz del Castillo, vol. 1., cap. 91. Humboldt, loc. cit.

<sup>2</sup> Caley's Life of Raleigh, vol. 1., p. 82.

the lungs in any quantity with impunity, I cannot believe that the holding of the nostrils would facilitate the *inhaling* of smoke or anything else; since, as I apprehend, the moderns correctly express by *inhaling*, what the old English authors signified by *swallowing* and *drinking* tobacco:—thus Davis:

Fumosus cannot eat a bit, but he  
Must *drink* tobacco, so to wash it down.<sup>1</sup>

Besides the common uses to which tobacco was applied, such as the gratification of a vitiated taste, or as a narcotic to sooth the inquietudes of the mind, for which purposes it is admirably adapted, inducing that repose of the passions which disposes to sleep, it was observed by the Spaniards, English, and the French, at their different points of discovery, that it performed an important office in the civil and religious ceremonies of the natives; who burnt it as an incense on the altars of their deities; and the smoke, as it rose on the gale being inhaled by their priests, produced on them effects similar to those experienced by the ancient sibyls and priestesses of Apollo when they respired the intoxicating gases issuing from the chasms in their grottoes and caves to fit them for uttering their equivocal responses. These ministrresses were also compelled to eat the leaves of the *laurus nobilis*, the tree consecrated to Apollo on account of his beloved *Δαφνη*, before they could be rendered sufficiently entheastic to deliver the oracles of the god. Lycophron gives the Pythoness the epithet of laurel-eater.

*Δαφνηφάγων φύιβαζεν ἐκ λαιμων ὄπα.*<sup>2</sup>

In the temple of Apollo at Delphi, there was a

<sup>1</sup> *Scourge of Folly*. Epigr. 184.

<sup>2</sup> *Alexandra*, 6. *Juvenal*, vii., 19. *Tibullus*, ii., v., 65. *Cœlius Rhodig.* Ant. Lect. v., 7.



fissure in the middle of the floor whence an entrancing vapour issued, which threw those who inhaled it into a frightful state of agitation. The tripod upon which the priestess sat on these occasions, was placed over this chasm, and when an answer was to be returned to any question propounded to the oracle, the pythoess seated herself upon the sacred stool, and after inhaling the vapour for a short time, her whole frame became fearfully convulsed, and, foaming at the mouth, with dishevelled hair and heaving bosom, "her eyes in a fine frenzy rolling," she delivered her fateful oracles.<sup>1</sup>

Hence we may fairly conclude that if tobacco had been known in ancient times, Apollo, the god of plants, would have directed this vaticinating demoniac to deliver her responses under the influence of its fumes, instead of risking her life with the infamous gases of the Delphic chasm, or by imbibing the poison of the laurel. And while the inspiring incense from her dhudeen of polished jet curled gracefully over her dark features, she could have chanted in tripping measure this moral response—

"The Indian weed withered quite,  
Green at noon, cut down at night,  
Shows thy decay,—all flesh is hay :  
Thus think, then drink tobacco.

The pipe that is so lily-white,  
Shows thee to be a mortal wight,  
And even such, gone with a touch :  
Thus think, then drink tobacco.

And when the smoke ascends on high,  
Think thou behold'st the vanity  
Of worldly stuff, gone with a puff :  
Thus think, then drink tobacco.

<sup>1</sup> Aristoph. in Plut. Schol. Diodorus Siculus, lib. xvi., cap. 26 ; Pausanias, lib. x., cap. 5 ; Lucan. Phars. lib. v., 128 and 165 ; Pollux, x., 23, 81 ; Virg. Æn. iii., 92, vi., 47 ; Plutarch de Pyth. Orac. 9—24.

And when the pipe grows foul within,  
 Think on thy soul, defiled with sin ;  
 And then the fire it doth require :  
 Thus think, then drink tobacco.

The ashes that are left behind  
 May serve to put thee still in mind  
 That unto dust return thou must :  
 Thus think, then drink tobacco."<sup>1</sup>

In all seriousness, there is a striking similarity in these two modes of deceiving the uninitiated. In both these systems of priestcraft, the priests became inspired almost by the same means ; and both delivered their answers under the excitement of a factitious furor occasioned by the juice of a poisonous plant, or the inhalation of intoxicating vapors. Antonio de Solís, speaking of the Mexican Indians, says, tobacco " had somewhat of superstition in it, for the juice of this herb was one of the ingredients with which the priests were worked up into madness and fury, when it was necessary for them to prepare themselves by abandoning their reason, to receive the devil's oracles."<sup>2</sup> We are informed by credible eye-witnesses of the early manners and customs of the Floridians and Virginians, that the priests and enchanters sometimes inhaled the smoke of tobacco until they became quite intoxicated ; and after lying insensible for three or four hours, they pretended to the credulous people that they had seen signs and visions during their trance, which gave them a clear forecast of the issue of such enterprises as they were about to undertake.<sup>3</sup> Nay, it was " of so precious an estimation amongst them," says the astronomer Hariot, " that they think theyr Gods are marvellously delighted therewith : whereupon sometimes they make hallowed fires, and cast some

<sup>1</sup> Two Broad-sides against Tobacco, &c., &c., &c., 1672.

<sup>2</sup> *Historia de la Conquista de Mexico*, iii. 15.

<sup>3</sup> Voyages of Captain Thomas Smith (Harris, vol. 1).

of the powder (of tobacco) therein for a sacrifice ; being in a storme upon the waters, to pacesie theyr Gods, they cast some into the ayre and into the water : so a weare for fish being newly set up, they cast some therein and some into the ayre : also after an escape of danger they cast into the ayre likewise ; but all done with strange gestures, stamping, sometimes dancing, clapping of hands, holding up of hands, and staring up into the heavens, uttering therewithal, and chattering strange words and noises.”<sup>1</sup> In some nations of America the priests swallowed the juice to throw them into that state of furor which enabled them to read the mysteries of futurity ; in others they swallowed the smoke, but the effects appear to have been the same, whether real or pretended. To those who have an interest in the deceiving, the means are easy.

The same author informs us that the Virginians reduced the dried leaves of the “vppowok” or tobacco, into powder, and took the “fume or smoke thereof, by sucking through pipes made of clay, into theyr stomach and head.”<sup>2</sup> But the natives of Oroonoko and of the islands prepared their tobacco somewhat differently, inasmuch as they wrapped the leaves in an envelope and formed it into a cigar, to which they gave the name *tabaco*, a word which according to Humboldt belongs to the ancient language of Haiti, signifying the instrument through which the smoke is inhaled, but the plant itself was called Yetl. When they were about to use these cigars they stuck them in tubes made of silver, of painted wood, or of shell.<sup>3</sup>

This agrees with what is recorded by Grizalvo Fernandez de Oviedo, Inspector-General of Com-

<sup>1</sup> Hakluyt's *Voyages*, vol. iii., p. 271.

<sup>2</sup> Hariot, *Voyage to Virginia*, and loc. cit.

<sup>3</sup> Humboldt, *Essay on New Spain*, p. 231.

merce in the New World, in the second edition of a part of his work,<sup>1</sup> published in Salamanca in 1546 ; where we find Tobacco especially described as the tube through which the natives inhaled by the nostrils the smoke of a certain poisonous herb to produce "insensibility." But with the exception of him of Oviedo, who resided in Cuba for many years shortly after the discovery of America, and the Baron Von Humboldt,<sup>2</sup> every other early writer I have had the opportunity to consult, speaks of tobacco as the herb or material smoked.

The conquistador Bernal Diaz, a follower of Cortez, a participator in all the achievements of that intrepid commander, and an accurate delineator of every circumstance that fell under his observation during these predatory wars, is allowed on all hands to be the most veracious and minute historian of the conquest of Mexico. Now Bernal Diaz says expressly that this *herb* was called *tabaco* by the Mexicans. In his description of the domestic habits of Motecusuma, he says that after dinner the women presented him with three beautifully painted and gilt tubes, which were filled with liquid amber and a herb called by the Indians *tabaco*. After dinner had been removed, and the singing and dancing finished, one of the tubes was lighted and the monarch took the smoke into his mouth, and when he had done this a short time he fell asleep.<sup>3</sup>

Munoz had the means of obtaining the materials of his history<sup>4</sup> from the most authentic sources. In narrating the first voyage of Columbus to America he notices the surprise of the Spaniards at the

<sup>1</sup> *Historia General de las Indias Occidentales*, lib. v., cap. 2.

<sup>2</sup> *Essay on New Spain*, p. 231.

<sup>3</sup> Bernal Diaz del Castillo, vol. i., p. 231. See also Antonio de Solis' *Historia de la Conquista de Mexico*, iii. 15.

<sup>4</sup> *Historia del Nuovo-Mundo*. Madrid, fol. 1793.

novelties of the country, thus—"Not less strange appeared to them the custom of the men, who generally walked abroad both in the fields and in roads with a lighted torch in their hands, and rolls of certain herbs wrapped up in a leaf, or rather of leaves rolled together, which they called *tabacos*. These they lighted at one end, and from the other sucked in the smoke."

Nicholas Monardes in his work<sup>1</sup> on the Drugs of America, when describing the uses to which it was converted by the priests, as noticed above, mentions the herb by the name now universally employed; such also is the name of the plant described by Hernandes of Toledo; and tobacco was the material smoked by Governor Lane and Hariot the Astronomer. Hariot says distinctly there is an herb which is sowed apart by itself and is called by the inhabitants vppowoc. In the West Indies it hath divers names according to the places and countries where it groweth and is used. The Spaniards generally call it Tabaco.<sup>2</sup> Besides, it might be argued that tobacco must have been generally understood by the first settlers in America in its present acceptation, from the very circumstance of several of the earliest writers endeavouring to establish the derivation of the word Tobacco as the plant smoked, by deducing it from Tobago or Tabasco.

From all this we are led to the inevitable conclusion that the islanders of Hispaniola used cigars which they called *Tabaco*, while on the continent, where they used pipes for their tobacco as well as cigars, they applied the name tabaco indiscriminately. But there is much confusion on this subject among the early writers.

<sup>1</sup> *Dos Libras de las Casas que si traen de las Indias Occidentales, que sirven al uso de Medicina.* Sevilla, 1565.

<sup>2</sup> Hakluyt, vol. iii., p. 771.

It is generally believed that tobacco was introduced into Europe in 1559 by Francisco Hernandez, better known as Hernandez de Toledo, one of the physicians to Philip II. of Spain, who had returned from Florida to his native country in that year. But it is stated likewise, and with an air of truth, that it was brought into Europe by the companions of Columbus on their return to Spain in the year 1493, after the discovery of the Bahama Islands.<sup>1</sup> It is not however equally verisimilar that, according to the report of others, it was imported along with syphilis as a specific for that atrocious disease, which is supposed to have been contracted by the Spaniards on their first visit to the New World, and thence disseminated over the rest of the Globe.

That both the seed and specimens of the plant, as also the prepared material, were brought into Spain by Columbus at that time, is highly probable. It is certain, at all events, that Cortez, only twenty-seven years afterwards, sent home some tobacco as a present to his sovereign, Charles V. But although allusions to the antisiphilitic properties of this weed are occasionally found in the writings of authors who flourished about that period, and among the rest in a work of our own literary monarch, James I., no trifling authority, who proposes the fore-mentioned report as a fact, in his famous Counterblast; yet there is no solid reason for believing it was brought from America as a cure for this malady. I have never read or heard the slightest credible evidence to that effect, or anything to prove indeed that even syphilis was a disease of West Indian or American extraction. King James notices it in these quaint terms:—"Tobacco being a common herb, which (though under diverse

<sup>1</sup> Opus cit.

names) grows almost everywhere, was first found out by some of the barbarous Indians to be a preservative or antidote against a *filthy disease*, whereunto these barbarous people are (as all men know) very much subject, what through the uncleanly and adust constitution of their bodies, and what through the intemperate heat of their climate. So that, as from them was first brought into Christendom that most detestable disease, so from them likewise was brought this use of tobacco, as a stinking and unsavoury antidote for so corrupted and execrable a malady, the stinking suffumigation whereof they yet use against that disease, making so one canker or vermine to eat out another."

The first generally recognised appearance of this disorder, and the discovery of America, were certainly coetaneous occurrences; but in that coincidence alone rests all the relation that ever subsisted between this famous and infamous event. I believe we have sufficient evidence to prove that the distemper was lurking in Europe long previous to this grand discovery. Many diseases have been considered new on their first assaults in a malignant or epidemic form, while in truth they had never been entire strangers: but having become either nearly worn out, or mellowed and modified by habitude, they had lain in repose until some disturbance in the constitution of the atmosphere, or in the earth, conspiring perhaps with moral and political causes, rendered the bodies of men morbidly susceptible, and resuscitated their slumbering energies. In like manner this disreputable complaint had no doubt always existed in some form, but not sufficiently virulent to be an object of particular regard. From the commencement of the history of human depravity till the age of Columbus was a sufficiently long period to divest it of its terrors. Having become naturalized as it were in the constitution under its ordinary conditions,

it had by long association ceased to be offensive in bodies thus rendered in some measure proof against the action of its virulence. But still it was the companion of man—his evil genius on truce ; and it required only the excitement arising from the privations, the filth, the pollutions of a camp, and such a frequent and promiscuous venus as we might suppose would be in vogue at the siege of Naples, to restore to it, or to re-invest it with, all the malign attributes of its nature ; for it was in the character of a true pestilence that it perpetrated its first recorded acts of defecation at the siege of Naples, and thence spread over the whole of Europe with the baleful rapidity of a simoom. Syphilis was known as a peculiar disease in 1492, but attracted little notice till two years after, when it broke out with fearful virulence in the French army while carrying on that celebrated siege in 1494. Many diseases already existing in a mild form have no doubt been exasperated into active malignity in a similar way.

I believe with Fracastorius and Antonio Sanches Rebeiro, that this disease was not a new one at the discovery of America, and it will require strong arguments to invalidate the proofs which the latter gentleman has adduced to that effect in the second edition of his treatise on this disease. Fracastorius' prophecy has been almost verified, and will no doubt be completely fulfilled in a century or two more. Thus he sings to his friend Cardinal Bembo, in his exquisite poem of Syphilides—

Nec semel in terris visam, sed sæpe fuisse  
 Ducendum est quamquam nec nomine nota  
 Hactenus illa fuit, quoniam longæva vetustas  
 Cuncta situ involvens et res et nomina delet,  
 Nec monumenta patrum seri videre nepotes.<sup>1</sup>

<sup>1</sup> Syphilides, sive de Morbo Gallico.



But he is more explicit in another place where he predicts :—Hic idem morbus interibit et extinguetur, mox etiam et nepotibus nostris rursus videndus renascetur, quemadmodum et præteritis aetatibus visum a majoribus nostris credendum est *de quo non pauca indicia* etiamnum extant.<sup>1</sup>

<sup>1</sup> De Contagionibus, et Morbis Contagiosis, lib. ii.

## LETTER II.

Tum vacuus, densa Pæti porrectus in umbrâ,  
Omnigenum ut patuit fœcunda scientia rerum,  
Dulcibus absumit lentas sermonibus horas.  
Explicat ingentes opulentæ mentis acervos,  
Ludenti et similis Naturæ arcana recludit ;  
Implicitos memorat sphæris cœlestibus orbes,  
Compagemque hominis, terræ et miracula pandit,  
Addit et orac'lis docti libamina fumi.

THORIUS.

All dainty meats I do defy,  
Which feed men fat as swine ;  
He is a frugal man indeed,  
That on a leaf can dine.

He needs no napkin for his hands,  
His fingers' ends to wipe,  
That keeps his kitchen in a box,  
And roast meat in a pipe.

MARROW OF COMPLAINT; *Lond.* 1654.

To return from this digression, Hernandez extolled the plant as if it had been endowed with extramundane qualities. He expatiated in glowing terms on its mirificent operations, its properties and various uses as a luxury calculated to annihilate the tardy hours of idleness, or as a medicine adapted by nature to soothe and tranquillize the perturbations of the spirit under the influences of disease and morbid irritability ; to calm the turbulent passions of the soul under all existing circumstances, and to induce the somniferous spirit of sleep to settle on the wearied and exhausted frame.

By this means tobacco quickly obtained numerous admirers, and the patronage of men in the highest ranks of society. All Spain was spell-bound with its fascinations, and resolved to sustain and extend its character as a drug of miraculous

and innumerable virtues, scarcely inferior in efficacy to the wood of the true Cross.<sup>1</sup> It is no wonder that it should thus have become an object of universal desire by men whose "only market of their time is but to eat and sleep." Through their wealth, and consequent slothful habits, the Spaniards at that time had little to do but yawn after new sources of sensuous gratification. They ultimately became such slaves to it that they insulted Religion by using it in places devoted to the worship of God, in so much that the clergy found it necessary to appeal to His Holiness to forbid its use in Churches.

About this epoch of our history, a French gentleman of the name of Jean Nicot, Seigneur de Villemain, a man of considerable taste and learning, was residing at the Court of Lisbon as ambassador of Francis II. of France. Nicot, attracted by the uncommon reputation of the plant, and the high encomiums lavished upon it by Hernandez and other admirers, was induced to try its qualities, and falling into the same delusion which bewildered the Spaniards in respect to its powers, he at once decided as a patriot and philosopher ought to decide, that it was a commodity too precious to be monopolized by a set of lazy Hidalgos ; that it was indeed an incense worthy of tickling the nostrils of Royalty. Accordingly, in the spirit of that gallantry which has always distinguished Frenchmen, he transmitted a packet of the seeds to Catharine de Medicis, widow of Henry II., under whose patronage, and perhaps example, this intoxicating weed speedily acquired fresh vigor on the Gallic soil ; and its use, in the character of a new luxury, became as popular and universal among all ranks of Frenchmen as with their swarthy neighbours of the Sangre azul.

<sup>1</sup> See page 25.

This may be taken as a luminous exemplification of the influence of one of the ruling principles of human conduct ; a principle which triumphed over the common understanding of the nation, and led them in slavish submission to fashion to idolize and to propagate one worthless plant with all the ardour of fanaticism ; whilst another of Pomona's choicest offerings, of vital importance to the well being of the human race, is tendered by the hand of Providence to the same people nearly at the same period, but is doomed to appeal to their judgment and their wants for centuries before it can obtain admission for the incredible stores of human subsistence it offers to supply. So miraculous is the power of this controlling element of popular idolatry ; so potent is the spell which fashion and high example cast over the general mind, that oftentimes scarcely a glimmering of reason remains to inform them whether they should feed with their mouths or their noses. You will come to a similar conclusion when you contrast the unequal fortunes of the tobacco and the potato plant in respect to their introduction into France. For the space of two centuries the potato, recommended even by the voice of science and the cohortations of philosophy, had to contend against the prejudice of the people without the smallest prospect of success. And it might have continued in hopeless importunacy till doomsday, had not Louis XV. at the end of that period taken advantage of a day of festivity, and wore in his breast a bunch of potato blossoms in the midst of his court. Mark the effect. Patronage did the work with electric speed. What the importunity of two hundred years failed to accomplish, was achieved in one moment by the more potent influence of Fashion. The people were touched with the rod of the magician—they awoke from their lethargy—they bowed obsequiously to the idol—acknow-

ledged its power—and in yawning bewilderment expressed their astonishment how it was possible their indifference could have so long blinded them to its utility as to prevent its general cultivation.

We must next follow the track of this peripatetic plant to the classic lands of Italy, where it basked for a while in fortune's sweetest smiles. It happened as a propitious event coincident with the nascent blaze of its fame in Spain, that the Cardinal Santa Croce was preparing to return from his Nunciature in Spain and Portugal in the same year; for, on his departure from these countries he took with him, among other rarities of the New World, a quantity of tobacco, which he distributed among his countrymen; and, while he supported it with all the weight of his patronage, his name shed upon it an odour of sanctity which not only served it as a passport into all classes of society, but contributed chiefly to establish it as one of the presiding lares of every hearth, where with the devotion of a phoenix, it made burnt offerings of itself, and diffused its grateful incense—

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“ Like the sweet south  
That breathes upon a bank of violets  
Stealing and giving odour.”

SHAKSPEARE.

The welcome it met with is indescribable; its advent was hailed with rapturous and insane joy; and poets and philosophers, in the madness of the hour, vied with each other in hyperboles of unmerited praise, till the heart sickens alike with the nauseating drug and the fulsomeness of the adulation bestowed upon its properties. Indeed, the degree of enthusiasm which attended its introduction to the land of the Cæsars may be measured by some of the poetry prostituted on the occasion; of which the following is a specimen in a miserable

translation of the Hymnus Tabaci of Castor Duranti—

—————Herb of immortal fame !  
Which hither first with Santa Croce came ;  
When he, his time of nunciature expired,  
Back from the Court of Portugal retired ;  
Even as his predecessor, great and good,  
Brought home the Cross.....

England was the next theatre on which this poison is found enacting its part ; and the honour of introducing it on that great stage is generally ascribed to Sir Francis Drake. Some affirm that he was even the first who brought it into Europe. Neither of these statements appears to be correct. I have shown above that Hernandez de Toledo brought tobacco into Europe as early as the year 1559, and it seems to be an established historical fact that Drake's first return from America did not take place till the month of August, 1573. So that there is an interval of fourteen years, in which it had become famous all over the rest of Europe, while it is said to have been unknown in England,—a very improbable circumstance. For when you take into consideration only the proximity of England, France, and Spain, the commercial relations existing between these states, and above all, the uninterrupted literary and scientific intercourse constantly maintained by the countries of Europe, through all the political bickerings of these nations, you will see how improbable it is that a herb so notorious should be unknown to the English till the return of Sir Francis Drake. Besides, you will recollect that the knowledge of an article of such celebrity in other quarters, did not depend at that period in England, on the usual chances of a precarious literary or general intercourse with Spain ; for at the very time of the return of Hernandez

England was still in close alliance with that country, the death of Queen Mary, the wife of Philip II., having occurred only a year previous; that Philip was not only courting the friendship of England, but aiming at the hand of Elizabeth its Queen; and lastly, that Hernandez, who was the chief patron of the plant, was one of the physicians of Philip, at whose court it was held in high estimation; so that there is hardly a doubt that tobacco was well known to the English at this period, especially to those about the court.

I cannot but believe, indeed, that it was notorious in England from the time when Sir John Hawkins' Report, dated July 1565, was made public, in which he says the "Floridians, when they travel, have a kind of dried herbe, which, with a cane and an earthern cup in the end, with fire and dried herbes put together, do suck thorow the cane the smoke thereof."<sup>1</sup>

Furthermore, we are assured by Lobel, a writer of unquestionable veracity, who was physician and botanist to James I., that it was cultivated in England in 1570,<sup>2</sup> three years earlier than the time it is reported to have made its first appearance on British soil.

For the same reasons it appears to me even more doubtful that Sir Walter Raleigh, to whom others ascribe the honour of its introduction into England, had any other connexion with the plant than what is generally assigned to him, inasmuch as his first voyage to America was not undertaken until the year 1584,<sup>3</sup> twenty-five years after the return of Hernandez from Florida. It appears

<sup>1</sup> Hakluyt's Voyages, vol. iii., p. 541.

<sup>2</sup> ADVERSARIA *Simplicium Medicamentorum*, p. 252. Fol. Lond. 1605.

<sup>3</sup> The charter to allow Raleigh to proceed to America for the purpose of making a settlement, is dated Lady-day, 1584. Hazard's State Papers, vol. i., p. 33.

also to be a settled question among the retailers of anecdote that Sir Walter was the first who taught Englishmen the common use of this luxury, and rendered it fashionable in England. Here, too, there is a slight error. Governor Lane, and Hariot the astronomer, have really the credit of being the first who introduced the disgusting practice of smoking into England. Hariot, who was in the Virginian expedition, dates his account 1586, in which he says, "We, ourselves, during the time we were there, used to suck it (the smoke of tobacco) after their manner, *as also since our return*, and have found many rare and wonderful experiments of the virtues thereof; of which the relation would require a volume by itself; the use of it by so many of late, men and *women* of great calling as else, and some learned physicians also, is sufficient witness."<sup>1</sup> It is just probable that one of the "women of great calling" was Queen Elizabeth herself, who, some affirm, was not averse to tobacco smoke, while others insinuate she preferred the smokers. And there may be some truth in this, since both Raleigh and Essex were inveterate cloud-blowers.

There is an anecdote told of Sir Walter and his servant, which must have happened, if it happened at all, before the use of the plant had become very common; or probably before this perfume had been vulgarised in the tap-room by every dustman and coal-heaver, *omnibus lippis atque tonsoribus*, who

---

From tube as black  
As winter chimney, or well polish'd jet,  
Exhale mundungus ill-perfuming scent.

J. PHILLIPS.

Be that as it may, Sir Walter is said to have been

<sup>1</sup> Hariot, Voyage to Virginia. Hakluyt, vol. iii., pp. 271, 272. Hariot's account was published in one vol. fol. 1588. Camden Annal. Eliz.



devoted to this plant ; and in lieu of the fumes of the bottle, regaled himself more philosophically with the incense of his pipe. Democritus of Abdera is reported to have lived for many days on nothing but the halitus from a pot of honey placed under his nose.<sup>1</sup> The pipe was Sir Walter's honey, and he often retired from the vanities of the world and left—

—————all meaner things,  
To low ambition, and the pride of kings,—  
POPE.

to solace himself with blowing a cloud ; and perhaps prophetic of his fate—

Darkling sigh and feed with dismal thought  
—————his anxious mind.<sup>2</sup>

Whether his musings took this direction or not is immaterial ; it happened on one of these occasions, while the Knight sat smoking in his study, enveloped in a dense fog of tobacco smoke, and like Cacus when about to fall into the embraces of Hercules—

Faucibus ingentem fumum, mirabile dictu,  
Evomit involvitque domum caligine cæca,—  
Æn. 8, 252.

that his servant entered with a tankard of ale and nutmeg, and seeing nothing but his master's legs extended from the chair, his head towering in the clouds, like

Some tall cliff that lifts its awful form,  
Swells from the vale, and midway leaves the storm,—  
GOLDSMITH.

<sup>1</sup> Athenæus, *Deipnosoph.*, lib. ii.

<sup>2</sup> Aubrey relates that Sir Walter smoked a pipe just before he laid his head on the block ; “at which,” says he, “some formal people were scandalized—I think it was properly done to settle his spirits.”

and observing through the palpable obscure a gleam of fire alternately dimming and glowing, and lighting up "the darkness of the scenery;" and an atred vapor issuing forth, heaving, eddying, swelling, and collapsing as if thrown from the chimney of a steam-engine—

Turbine fumantem piceo et candente favilla,—  
Æn. 3, 572.

he was struck with horror, and believing his master's head was on fire, dashed the tankard of ale and nutmeg over him, and ran down stairs bawling out "fire! fire! Sir Walter has read till his head's in a blaze, and the smoke is bursting from his mouth and nose!"

Had Sir Walter been an ordinary man, it would not have surprised us to learn that after this cold affusion he—

——Rose staring like a snake,  
Wondering to see himself awake.  
PARNELL.

But he was an experienced soldier and not to be taken by surprise, and he was too much the philosopher to lose his temper at the rough humanity of his servant. It is more likely he sat still and enjoyed the joke, like the divine Socrates on a similar occasion, of whom it is said, when his wife emptied the vials of her wrath—

—————Upon his hed—  
This selly man sat still as he wer ded ;  
He wiped his hed, no more dorst he sain,  
But, "er the thunder stint, there cometh rain."  
CHAUCER.

It is related by Oldys, that Sir Walter being once in conversation with the Queen, and discussing the singular properties of this new and extraordinary herb, he "assured Her Majesty he had so well

experienced the nature of it, that he could tell her of what weight even the smoke would be in any quantity proposed to be consumed. Her Majesty fixing her thoughts upon the most impracticable part of the experiment, that of bounding the smoke in a balance, suspected that he put the traveller upon her, and would needs lay him a wager he could not solve the doubt ; so he procured a quantity agreed upon to be thoroughly smoked ; then went to weighing, but it was of the ashes ; and in the conclusion, what was wanting in the prime weight of the tobacco, Her Majesty did not deny to have been evaporated in smoke ; and further said, that many labourers in the fire she had heard of who had turned their gold into smoke, but Raleigh was the first who had turned smoke into gold.”<sup>1</sup>

There is a tradition extant that Sir Walter Raleigh used to sit at his door, in Friday Street, parish of St. Matthew, smoking with Sir Hugh Middleton, in the reign of Queen Elizabeth ; and it has been reasonably surmised, on the faith of the tradition being true, that the practice of smoking was propagated by means of the public manner in which it was exhibited, and the aromatic flavour inhaled by the passengers, exclusive of the singularity of the circumstance and eminence of the parties.<sup>2</sup>

<sup>1</sup> Life of Raleigh, p. 75.

<sup>2</sup> Malcom. *Londinum Redivivum*, vol. iv., p. 904.

### LETTER III.

Planta beata ! decus terrarum, munus Olympi !  
Non tantùm agricolis duro lassata labore  
Membra levas, minuis victus absentis amorem,  
Fundis et absque cibo sparsas in corpore vires ;  
Sed radium specimenque Dei, sapientibus ipsis  
Ingenium illustras. siquando aut multa tenebras  
Colligit ingluvies cerebro, aut moimine longo  
Intellectus hiat, rerum neque concipit umbras  
Conceptasve tenet, vel cæca oblivia regnant,  
Ut semel irrepsit blando lux indita fumo,  
Aufugiunt nubes atræ, curæque tenaces.

RAPHAEL THORIUS.

IN my last letter we left the noisome weed creeping rapidly into repute with the courtiers of the virgin Queen, as a prophylactic against ennui and a substitute for thought. It was chiefly through the example and patronage of Sir Walter Raleigh and the Earl of Essex, whose likes and dislikes at that time had all the weight of a code of laws in matters relating to taste, that the practice of smoking became a court luxury. Having thus obtained a firm footing and eminent station among the great, the influence of fashion propagated the barbarous custom like a contagion ; and long before the decease of the sovereign in whose reign it was introduced, the spirit of tobacco might be seen brooding, dark, lazy, and pestilent, like a November fog, over every civilized spot of the empire. From the palace to the hut, neither age, nor sex, nor condition, that could procure the luxury, escaped the contamination of its noxious vapour, or the tranquillizing influence of its poison.

Whether tobacco was introduced into Turkey from Europe or from Asia, is difficult to decide.

The question fortunately is of small importance. Probably the Turks acquired the habit of smoking from both sources nearly at the same time ; for on the one hand there can hardly be a doubt that they learnt it from the inhabitants of Bagdad, from which they had a short time before expelled the Persians, and where, it is stated by Sir Thomas Herbert,<sup>1</sup> they intoxicated themselves in the coffee houses with arrack and *tobacco* ; whilst Sandys, on the other hand, who visited Constantinople in 1610, describes the habit as one of recent introduction, and likely to have been communicated by the English.<sup>2</sup>

It appears, however, from the relations of old travellers, to have passed early into the East, and spread rapidly over Asia and Africa, through the ordinary channels and means of commerce.

In this manner, in the space of two hundred and ninety years from its first appearance in Europe, tobacco has steadily followed the track of man, whether savage or sage, wherever he has impressed his footsteps. It has attended him with the constancy of his own shadow in every haunt, over every wave, and in every climate, cold, hot, and temperate, on the face of the globe. It is the sweetest incense of the wigwam, and its odours have impregnated the air of a thousand palaces. Like man, too, around whom it has so closely entwined itself, it has experienced the severest storms of adversity and the blindest smiles of fortune ; now basking in the sunshine of royal favour, and now disgraced and persecuted with a rancour and hatred as intense as if it had been a being endowed with the power of offending, or of reciprocating enmity. It appears to have cast a spell indeed over the intellects of a large portion of the human

<sup>1</sup> Some Years' Travels into Africa, and Asia the Great, &c.

<sup>2</sup> Relation of a Journey, &c., lib. i., p. 61.

race, both friends and foes, of all ranks, conditions, and degrees of civilization. Harderus, descanting on the pernicious effects of tobacco on the human constitution, confesses at the same time, *Nicotiana herba est non solum ubivis decantata sed præcipuæ hominum parti cujuscumque dignitatis aut sortis illi fuerint* ;<sup>1</sup> and Ramazzini admits also "that the most celebrated writers have extolled its virtues, and it is deservedly ranked among the medicinal plants."<sup>2</sup> But, notwithstanding the praises bestowed upon it, by these and a hundred other respectable authors, it met with a share of abuse and persecution far beyond what the nature of the thing itself would be supposed to evoke, or common sense dictate. Had this insane opposition, however, been instituted and carried on by men in those ranks of life to which the discussion of subjects of this nature properly belongs, such procedure, whether unwise or prudent, would perhaps never have called forth an observation, and the plant and its fortunes might have remained in the mediocre state of estimation which would have left Great Britain without a large and valuable branch of revenue, and an unnecessary annual expense to the people of nearly eight millions sterling. But—

There's a divinity that shapes our ends,  
Rough hew them how we wil—

SHAKESPEARE.

which seems to extend even to plants. For it happened that the practice of smoking had become so extravagant and dangerous to public morals, even so early as the reign of Queen Elizabeth, that she was obliged to put the law in force against the suicidal and ruinous habit. King James, her successor, too, must have had cogent

<sup>1</sup> *Anat. Pract.*

<sup>2</sup> *Morb. Artif.* cap. 16.

reasons for discountenancing the use of tobacco, if we may judge from the strenuous and persevering efforts with which he opposed the "stinking weed." He began the campaign in 1604, by issuing a proclamation against it, on his own responsibility,—for the British monarchy was not then, as now, confined in a strait waistcoat,—and imposed a duty of 6s. 8d. a pound in addition to the 2d. which already existed.<sup>1</sup> In 1620, his great aversion continuing, he published another proclamation, commencing thus:—"Whereas we, out of the dislike we had of the use of tobacco, tending to a general and new corruption both of men's bodies and manners, and yet, nevertheless, holding it of the two, more tolerable that the same should be imported, amongst many other vanities and superfluities which came from beyond seas, than to be permitted to be planted here within this realm, thereby to abuse and misemploy the soil of this fruitful kingdom, &c."<sup>2</sup>

In 1624 he made his final assault, in the shape of a third proclamation, in which he still shows the inveterate animosity he ever entertained to "the use of tobacco in general, as tending to the corruption both of the health and manners of our people."

I believe it was about the time of his first proclamation that King James published, without either date or title, his celebrated philippic against tobacco.<sup>3</sup> But it appeared afterwards with the title of "Counterblaste to Tobacco," in the first authorized edition of his works, collected and published by Bishop Montague.

This tract is highly characteristic of the man and of the monarch; and, as far as it goes, is a luminous exposition of the sentiments and manners

<sup>1</sup> *Fœdera*, vol. xiv., p. 601. <sup>2</sup> *Fœdera*, vol. xvii., p. 233.

<sup>3</sup> Harris's *Life of James I.*

of the age in which it was written. But in order that you may judge for yourselves on this topic, and also see his opinions on the use of tobacco, in the quaint language and style of the time, I will introduce a few random extracts from this remarkable and amusing document, which a generous and patriarchal solicitude for the welfare of his subjects induced him to compose ; for with all his failings, and he had many, he was truly the father of his people.

His character is an amalgam of contradictory elements ; he is a microcosm of inconsistencies ; and, both as a man and a king, he would form a curious and interesting study to the psychologist as well as the historian. I can only draw your attention to his character in connection with our subject. His natural disposition was eminently benevolent ; and he invariably inclined rather to forgive and forget injuries than to punish them. He not only administered with exemplary attention and indefatigable zeal the internal government of an extensive empire ; but he laboured personally, night and day, with head and hands, of which this singular treatise is an example, to benefit and improve the condition of his people. He made some lamentable mistakes ; but it may be said of him, generally, that where he deviated from the rule of right, his errors sprang rather from his head than from his heart :—his faults were often the excess of his virtues. Both his public and private conduct was greatly influenced by his constitutional weakness, aggravated by an education in which the illusion of Divine right was the ruling spirit and principle ; and you cannot wonder if you find him sometimes absurdly “ assume the god, affect to nod,” and “ shake his awful curls.” He was deeply imbued with the prejudices and superstitions which prevailed somehow to great excess



rates in his reign, and being nothing in advance of the age in which he lived, some of his acts bore the stamp of barbaric despotism and cruelty. He was morally and physically an uncommonly timorous man, and consequently his decisions were in constant danger of being regulated by the unsteady vacillations of a morbidly nervous temperament: some of his greatest blunders arose from forming immature judgments through his timorous impatience to get rid of difficulties which required more fortitude and courage to grapple with than he possessed, and the consequence is, that there are some stains on his character which no time or circumstance can efface. Careless, or blind to final consequences, and deaf even to the voice of nature, he selfishly shrank from the duties of a father, a man, a Protestant, and a king, because these duties involved some danger, difficulty, expense, and personal exertion, whilst he could rise with the intrepidity of a giant in armour against a simple plant, and for years carry on a war of extermination with the courage and resolution of a demigod. He would quail under the frown of a titled pathic and murderer, and meanly temporize with circumstances which he was too pusillanimous by nature to confront with the majesty of a king, or the divine impartiality of a judge, whilst he could mercilessly roast and drown aged and defenceless females, without the shadow of a crime! He was better fitted by nature and education for knight errantry in controversial divinity, than for playing the game of kingcraft. I believe his errors were due to time, circumstance, and constitutional debility.

He commences his "Counterblaste" by denouncing the use of tobacco as a "custom loathsome to the eye, hateful to the nose, harmful to the brain, dangerous to the lungs, and in the black stinking fume thereof nearest resembling the

horrible stygian smoke of the pit that is bottomless." Now mark the Royal climax ! "Is it not the greatest sin of all," he continues, "that you, the people of all sorts in this kingdom, *who are created and ordained by God to bestow both your persons and goods for the maintenance both of the honour and safety of your King and commonwealth*, should disable yourselves in both. In your persons, that you are not able to ride or walk the journey of a Jew's sabbath, but you must have a reekie coal brought you from the next poor-house to kindle your tobacco with ?

"Now, how you are by this custom disabled in your goods, let the gentry of this land bear witness, some of them bestowing three, some four hundred pounds a year upon this precious stink, &c.

"For the vanities committed in this filthy custom, is it not great vanity and uselessness, that at the table, a place of respect, of cleanness and of modesty, men should not be ashamed to sit tossing of tobacco pipes; and puffing of the smoke one to another, making the filthy smoke and stink thereof exhale across the dishes, and infect the air, when very often men that abhor it are at their repast ?

"But not only meal time, but no other time nor action is exempted from the public use of this uncivil trick. And is it not a greater vanity that a man cannot welcome his friend now, but straight they must be in hand with tobacco ? No, it is because in place of a curse, a point of good fellowship, and he that will refuse to take a pipe with his fellows, though by his own election he would rather feel the savour of a stink, is accounted peevish and no good company, even as they do with tipping in the cold eastern countries. Yea, the mistress cannot in more mannerly kind entertain her servant than by giving him out of her fair hand a pipe of tobacco. \* \* \* \* \*

And now, good countrymen, let us (I pray you)

consider what honour or policy can move us to imitate the barbarous and beastly manners of the wild, godless, and slavish *Indians*, especially in so vile and stinking a custom. Shall we that disdain to imitate the manners of our neighbour *France*, (having the style of the great Christian Kingdom,) and that cannot endure the spirit of the *Spaniards*, (their king being now comparable in largeness of dominion to the greatest emperor of Turkey;) shall we, I say, that have been so long civil and wealthy in peace, famous and invincible in war, fortunate in both, we that have been ever able to aid any of our neighbours, (but never deafened any of their ears with any of our supplications for assistance;) shall we, I say, without blushing, abase ourselves so far as to imitate these beastly *Indians*, slaves to the Spaniards, the refuse of the world, and as yet aliens from the Holy covenant of God? Why do we not as well imitate them in walking naked as they do, in preferring glasses, feathers, and such toys, to gold and precious stones, as they do? Yea, why do we not deny God and adore the devils as they do?"<sup>1</sup>

No sooner was James gathered to his fathers and his son Charles I. seated on his throne, than the latter began to follow the example of his predecessor by publishing prohibitory proclamations against the importation of tobacco, but with this essential and statesmanlike difference, that his father discountenanced the commodity from a pure zeal for what he considered the public good, whereas the son only opposed a free trade in it from motives of gain. Restriction suits an absolute monarch, because it is made to fill his private coffers; an open trade is like a fertilizing stream, it diffuses the elements of wealth wherever it flows, and blesses the people with

<sup>1</sup> King James's Works, p. 214, fol. 1616.

general abundance. Charles would permit no tobacco to enter the ports of the realm, but what came from the plantations in Virginia and the Bermudas, took the trade into his own hands, and became Tobacconist-general to the state. In his proclamation on the formation of a Royal government in Virginia, he comes to the point with manliness and candour,—“Whereas the tobacco of those plantations cannot be managed for the good of the plantations unless it be brought into one hand, &c., we resolve to take the same into *our own* hands and to give such prices for the same as may give reasonable satisfaction.”<sup>1</sup> In another prohibition, proclaimed in 1627, he continues the same policy :—“No person shall henceforth buy any tobacco here, but from *our* commissioners, which tobacco shall be sealed and stamped, and when sold again, a note shall be made expressing the time when bought, and the quantity and quality thereof.”<sup>2</sup>

Charles, therefore, cannot be considered an enemy, but rather an encourager of the use of tobacco. He merged the morality in the vast wealth he foresaw would accrue to him from a luxury so universally courted. No monarch of that era acted with the sound political foresight of Charles. Louis XIV. like James I. hated tobacco with the most heroic disgust, although it formed one of his best sources of revenue. In 1635, this monarch issued an edict, forbidding any one from selling tobacco except Apothecaries, who were in their turn prohibited from dispensing it without the sanction of a Physician.

I know not whether Charles II. inherited the dislike to tobacco his predecessors entertained ;

<sup>1</sup> *Fœdera*, vol. xviii., p. 18.

<sup>2</sup> *Anderson's Comm.* vol. ii., p. 326.

but it is said that on one occasion he sent a letter to the University of Cambridge forbidding the members to wear periwigs, *smoke tobacco*, or read their sermons! Lord Rochester said of his master, with more truth than lay on the surface, Charles

Never said a foolish thing,  
And never did a wise one—

to which the witty monarch, when told of his favourite's sarcasm, retorted, "it is all very true, but the reason is obvious, my deeds are my ministers', my speech is my own."

In 1590, Shah Abbas of Persia enacted a law against the use of tobacco; but numbers of the inhabitants of cities unwilling to abandon the habit they had acquired, fled to the mountains, where they hid themselves rather than forego the pleasure of smoking; and in 1624, His Holiness Pope Urban VIII. published a bull of excommunication against all those who should be found taking snuff in *church*.

## LETTER IV.

Ira feri mota est ! nec fulmine lenius arsit :  
Lux micat ex oculis, spiratque e pectore flamma.  
OVID.

You must now follow the plant to the Hyperborean regions and take a peep at the

Vox fera, trux vultus, verissima martis imago,<sup>1</sup>

of the Head of the Eastern Church, whom you will find far outstripping in zeal and cruelty the simple policy of the Pope. Indeed the course pursued on the present occasion by these sovereigns, was marked by the usual difference which distinguishes the savage from the saint. The one satisfies himself with the mere prohibition of a nuisance, whilst the track of the Northern Bear is signalised by all the marks of physical brutality which usually indicate the haunts of that animal. In the year 1634, Feodor of Russia, commonly called the Duke of Moscow, interdicted the practice of smoking throughout his dominions, from the fear of incendiarism. He instituted a special court of law for trying and punishing the offenders, and when any one was convicted of the offence of smoking tobacco after the promulgation of the decree, he was punished by having his *nose cut off*. This act of atrocity is in perfect harmony with the Sauromatan despotism now and then humanely manifested in the application of the knout to ladies of

<sup>1</sup> Ovidii, Trist, lib. v. eleg. 7.

high rank, who have sometimes been actually stripped naked and flogged in public.<sup>1</sup>

This man distinguished himself by another act, which I believe none but a Russian or Louis Napoleon would have sufficient moral courage either to attempt or achieve. Under the mask of examining their claims to title, he induced the nobles to bring together all their patents of nobility, charters of privilege, and the like, to the palace ; and when he had got them in his power he threw them into the fire, telling the holders of them that their nobility should in future depend on merit alone ; thus reducing to practice the sentiment of Juvenal.

—Nobilitas sola est atque unica virtus. <sup>2</sup>

But you will rejoice to leave these “thrilling regions of thick-ribbed ice,” and find yourselves among the bustling little ant-hills in the Alps, ycleped the Cantons of Switzerland, where some of these minikin independencies becoming infected with the contagion of the times, undertook spontaneously to play second fiddle to the larger states around them, by yelping in the hue and cry raised against tobacco.

In the year 1653, the Council of Apenzel, prohibited in awful solemnity the use of tobacco, and not only cited smokers before them and punished them for their delinquencies, but also published an order requiring all innkeepers to inform against such as were found smoking in their houses, &c.

It is difficult to know at this distant day whether the disciples of Zuinglius and Bullangarius were

<sup>1</sup> Madame Lapouchin received this punishment in the reign of the Empress Elizabeth. But it has been repeated on other ladies since that time, by the command of male sovereigns !

<sup>2</sup> Sat. viii. 20.

actuated by the same stern fanaticism as the other persecutors of tobacco ; but if not, their conduct is distinguished by a characteristically narrow-minded and restricted republican freedom. In 1661 you will find among other proscriptions issued against tobacco, that the police of the canton of Bern drew up to their immortal honour a body of regulations which they distributed among the ten commandments, each commandment being a text to the succeeding regulation ; and the regulation a comment on the text ; and in this modification of the Decalogue, the prohibition of smoking tobacco stood in the list *next after—thou shall not commit adultery !* This regulation remained in force till the middle of the 18th century.

There is no end to the vagaries of these republican cantons. They resemble certain larger states of that denomination, who only knowing the essence of liberty by name, make an idol of its shadow, and offer on its altar whole hecatombs of human victims. On the principle of *omne ignotum pro magnifico*, they are loud in the cause, and resolute in the defence of a liberty they never experienced, whilst they carry their restrictions upon freedom into the very hearths of the people. As an additional example of Swiss freedom, I may mention that dancing is not permitted in the canton of Zurich, unless by special permission of the Government, which is almost uniformly refused ; and in Glarus and St. Gall, neither man nor woman can marry without the consent of their respective parents ; so that a man at the prudent and sober age of 50, may be prevented from marrying by his father withholding his consent ! The difficulty is got over at St. Gall, by an appeal to the Council, which in the very spirit of self-stultification deliberate on the case, and if the councillors consider the opposition frivolous and vexatious they advise the



parents to let the lovers have their own way.  
*Risum teneatis, amici?*

In the year 1690 the Nicotian war was renewed in Italy by his Holiness Pope Innocent XII., who was probably actuated by the same motives which inspired his predecessor.—Be that as it may, this successor of St. Peter, instead of operating on the ears, according to the rights derived from Apostolical succession, only excommunicated all persons convicted of taking snuff or using tobacco in the Church of St. Peter at Rome, for it appears snuff was taken to great excess all over Italy; we are told by Ramazzini, it was used in his time by man, woman, and child; “*Hujus seculi (about 1650) saltem in Italia nostra, inventum, seu vitiosa consuetudo est pulvis iste ex herba Nicotiana compositus, nihilque eo frequentius est cum mulieribus, tum viris, pueris quoque, ut illius emptio inter quotidianas familiæ impensas numeretur.*”<sup>1</sup>

In Turkey, about the beginning of the 17th century, the custom of smoking tobacco, which was then beginning to be adopted by the faithful, was considered so disgusting and ridiculous, that it was forbidden by the Pasha, and any Mussulman found smoking was led through the streets on an ass, with his face turned to the tail, and a tobacco pipe stuck through his nose. Again, in 1638, Amurath IV. believing, for some unexplained reasons, that tobacco rendered the persons using it impotent, published an edict making the use of this luxury, now so prevalent in Turkey, a capital offence, which, according to the custom of the Turks, was formerly punished on the spot. The Turks are celebrated above all other nations for doing this sort of business in an off-hand and gentlemanly style. Their Sultans

<sup>1</sup> *Morb. Artif.* cap. 16.

used to pique themselves on their dexterity in slicing off a head ; it was no more to them than the decapitation of an onion. Long and extensive practice had rendered them dexterous to such a degree that the person decapitated knew nothing about it. Once upon a time one of the Solymans was boasting of the nicety of his touch as a headsman, when he observed a new made courtier, who perhaps had been only a barber the week before, smiling, " dost thou doubt my skill ?" said Solyman. " I doubted not your highness's skill," replied the man of three tails. " Allah kerim !" ejaculated Solyman. " Take a pinch of snuff ?" the courtier took the pinch and applied it to his nose, when up went his shoulders to sneeze, but before the sneeze got vent, his head was rolling a yard off, and it continued to roll, and roll, and roll ; the effects of the unfinished sneeze acting on the head like a steam engine ; and it might have rolled till the second appearance of Mahomed, had it not rolled into the Bosphorus.

This will probably remind you of the anecdote of Doll, in Gay's Trivia, where he describes a fair held on the ice of the Thames, above London Bridge.

" Doll every day had walk'd these treacherous roads ;  
 Her neck grew warpt beneath autumnal loads  
 Of various fruit : she now a basket bore ;  
 That head, alas ! shall basket bear no more.  
 Each booth she frequent pass'd, in quest of gain,  
 And boys with pleasure heard her thrilling strain.  
 Ah, Doll ! all mortals must resign their breath,  
 And industry itself submit to death !  
 The crackling crystal yields ; she sinks, she dies,  
 Her head, chop'd off, from her lost shoulders flies ;  
 Pippins she cry'd ; but death her voice confounds ;  
 And pip—pip—pip—along the ice resounds."

Thus far only have I deemed it useful or expedient to comment on the mere origin and progress of tobacco. What follows, relates chiefly to its

physical properties, and its effects on animal life, a topic of infinitely more importance than any thing you have yet learnt of its history.

It is surprising with what rapidity tobacco cast its spell over the whole globe; how readily a stinking weed was converted into a general luxury; with what facility its use became first a settled habit, and then a human necessity in every country—savage, barbarous, and civilized; and how pertinaciously and successfully it, or rather the influence of depraved taste, finally triumphed over every attempt to extirpate the nuisance. I am not acquainted with any other plant that has been so caressed and decried; nor any vegetable production of the same nature and slender claims to consideration that has been opposed and persecuted with such hostility and dislike, and supported with such constancy and attachment. Almost on its first entrance into Europe it excited an epidemic frenzy in its favour, accompanied with an insatiable craving for the enjoyment of its fascinating and pernicious narcotism; and you have just seen the effects of this general hallucination. Kings in vain cried havoc! and let loose the dogs of war: fools shot their bolts but shot them beyond the mark, and the hierophantic denunciations fulminated by churches ended only in *smoke*. But that which will appear to you most inexplicable is, that in proportion to the fierceness of the opposition it met with, this plant lived, flourished, and increased the more; it throve like the sycamore under oppression, and that which would have crushed any other object conducted most of all to sustain it, and ultimately establish it in security.

Now, although one might be considered rash to affirm that things in the moral world increase under tyrannical restraints, yet there is truth in the predicate. Persecution was its best friend;

it conferred on the poison a character, it invested it with an interest far above its deserts, and then delivered it over to the iron voice and the hundred tongues of fame which finally crowned it with victory. To inquire how and whence this anti-peristatic success emanates, would be foreign to the present subject; I may, however, refer you for an answer to the contradictory elements of our own nature. The issue of a thousand sanguinary experiments shows, and it might safely be received as an axiom, that persecution in general only waters the crop it would eradicate. You will learn this truth in the history of mankind, particularly where it recounts the rise and progress of our religion. If you carefully examine into those atrocities called persecutions, in behalf of Religion, which from the beginning of Christianity the strong have perpetrated against the weak, and dyed the annals of their respective eras in blood, you will not fail to discover some such clue to the solution of the problem. Wherever the tyranny of armed injustice is exercised, you will clearly discern in the midst of the work of vengeance, and arising out of the discordant passions of men, a host of countervailing agencies always resolute in defence of the oppressed, perhaps springing as often from the gratification of opposing the oppressor, as from a love of impartial justice. But the result is the same, and thus they are brought into public view. The ephemeral breath of popular admiration magnifies their misfortunes and their merits, places them in such social conditions and surrounds them with such an array of friendship, as would probably never have distinguished their career had they been left to float silently down the stream of time without notice or molestation. Such for the most part is the course of events in the moral world: and you will see that persecution is generally pretty uniform in

all its leading circumstances and results, whether its cruelties be exercised upon an individual or a nation ; nor does it alter the general fact whether the victim be a man or a plant. These reflections are both strengthened and exemplified in the foregoing sketch of the life and adventures of Tobacco. Had this fascinating weed been left to rest solely on its own merits, it would perhaps either have silently relapsed into its pristine obscurity, or sunk into the insignificance of a name in the nomenclature of the science that owns it ; whereas opposition gave it momentum, and, like rumour, it gathered strength as it proceeded. Tertullian warns the persecutors of the Christians in a strain confirmatory of these remarks, " The more you mow us down," says he, " the thicker we will rise : the Christian blood you spill is like the seed you sow."—There are some exceptions to the general truth of these conclusions, the only one at present that occurs to me, is the hypotheticalal history of the Cagots of the Pyrenees.

## LETTER V.

Bos.—Sir, believe me, upon my relation, for what I tell you the world shall not reprove. I have been in the Indies, where this herb grows, where neither myself, nor a dozen gentlemen more, of my knowledge, have received the taste of any other nutriment in the world, for the space of one and twenty weeks, but the fume of this simple only: therefore it cannot be but 'tis most "divine." Further take it in the nature, in the true kind; so, it makes an antidote, that, had you taken the most deadly poisonous plant in all Italy, it should expel it, and clarify you, with as much ease as I speak. And for your green wound,—your Balsamum and your St. John's wort are all mere gulleries and trash to it, especially your Trinidado. Your Nicotian is good too. I could say what I know of it for expulsion of rheums, raw humours, crudities, obstruction, with a thousand of this kind; but I profess myself no quacksalver. Only thus much; by Hercules, I do hold it, and will affirm it before any prince in Europe, to be the most sovereign and precious weed that ever the earth tendered to the use of man.—BEN JONSON.<sup>1</sup>

I WILL now acquaint you with the opinions and speculations of some of the early writers on the vaunted excellencies of tobacco; and state impartially its good effects, and the various uses to which it has been reported to be successfully applied in medicine.

It is not probable that a plant endowed with the peculiar properties ascribed to tobacco, could remain long unknown to savages so sagacious and skilful in practical botany as the native Americans, since it possesses, according to their report and the testimony of travellers, the very virtues most required in savage life where war and hunting are their trade and pastime. The Mexicans, and, indeed all the American Indians, held tobacco in the highest estimation as a remedy for various bodily ailments, particularly for cold in the head, toothache, pains in the bowels, and wounds. They had very early discovered its remarkable power as a narcotic, in pain, hunger, and distress;

<sup>1</sup> Every Man in his Humour, act iii., scene 2.

and they smoked it to procure sleep, to soothe the anxieties of the mind, and induce that state of quietism which the present "Indians inhabiting the forests of the Oroonoka call with great simplicity, dreaming with the eyes open."<sup>1</sup> But besides these common uses, it served another equally essential purpose to the savage whose precarious mode of life exposed him to long-continued miseries, hunger, and thirst. Living for the most part upon flesh-meat, as he has done from time immemorial, it is an extraordinary circumstance that his instincts should have led him to a discovery in tobacco smoke, of a means of retarding the change of matter, or decay in the tissues of his body, and thereby making hunger more endurable.<sup>2</sup>

"The smoke," says Sir John Hawkins, "satisfieth their hunger, and therewith they live four or five days without meat or drink, and this all the Frenchmen used for the same purpose; yet do they hold opinion withall, that it causes water and phlegm to void from their *stomachs*."<sup>3</sup> The Indians perform long journeys through the deserts, to places far apart from each other, and when their food fails them they chew a pill about the size of a pea, composed of tobacco, by the help of which alone they are enabled to travel for the space of four days together without any other sustenance.<sup>4</sup>

Sir William Vaughan believes that a pipe taken fasting in a raw, rainy morning in the months of May, June, and July, to be a singular and sudden remedy against the megrims, the toothache, the fits

<sup>1</sup> Humboldt, *Pers. Nar.*, vol. v., p. 666.

<sup>2</sup> Liebig, *Animal Chemistry*, &c., p. 179.

<sup>3</sup> *Op. Cit.*, p. 341.

<sup>4</sup> Nicolaus Monardes, *Dos Libras de las Cosas que si traen de las Indias Occidentales, que sirven al uso de Medicina*. See also his *Hist. Rer. Indicarum*.

of the mother, the falling sickness, the dropsy, the gout, and against all such diseases as are caused of windy, cold, or waterish humors.<sup>1</sup>

Nicot, in his *Dictionnaire*, at the word, speaks thus of its virtues—*Nicotiane est une espece d'herbe, de vertu admirable pour guerir toutes, navrures, playes, ulceres, chancres, dartes, et autres tels accidents au corps humain.* Franciscus Redi knew men who were in the habit of curing incisions and simple wounds by the application of the powder of tobacco alone. The Rev. Father Antonio Veiro, the Jesuit, who lived thirty years in the Brazils, told him that “in these countries there is no medicine in such high repute for curing diseases as the fresh juice and the leaves of tobacco.” “There are,” continues Redi, “persons who chew and swallow small portions of the leaf daily with perfect impunity, whereas a small drop of the essential oil taken into the stomach is followed by the most distressing and deadly effects.” Speaking of the various ingenious ways men have devised for the purpose of enjoying the smoke of tobacco, he observes that, not content with using it by the mouth, men had lately invented an instrument by which they can fill the intestines with the smoke instead of enema, in cases of many of the most contumacious disorders of the bowels, but they have found it to be particularly beneficial in ileus, &c.<sup>2</sup> Redi is the first author with whose works I am acquainted, who mentions this now common and sometimes useful application of the smoke of tobacco. Horstius, a celebrated German physician, bestows uncommon praise on the properties and uses of this herb. He says it is useful in catarrhs whether it be snuffed in the form of

<sup>1</sup> Directions for Health. 1613.

<sup>2</sup> Esperienze intorno a diverse cose Naturali particolarmente a quelle che ci sono portate dall' Indie. 1671.



powder by the nose, or inhaled in smoke by the mouth fasting, after having attended to the bowels, &c.;—that it stills the sensations of hunger and thirst, and in this respect it had saved the lives of thousands of soldiers during the long German war, when their provisions had become both scarce and bad, and the waters of their encampment so filthy and unwholesome that they were unfit for use. After expiating on its soothing, concoctive, and hypnotic virtues, and the extraordinary benefit derived from its constant use by the half-famished soldiers, he says, “*Taceo quod animi nonnihil ad cordatius pugnandum addiderit.*”<sup>1</sup> I presume this quite agrees with modern experience. Epiphanius Ferdinando, another respectable Spanish physician of the same period, extols its abstergent, tramautic, and various other virtues, more especially a decoction of the leaves in empyema, which it cures like a charm.<sup>2</sup> Tobacco, with this author, seems to possess all the qualities of Cato’s cabbage.

Van Helmont, or Helmontius, as he is generally styled, the most renowned and learned physician of his time, supports many of the opinions of Horstius respecting the apositic and adipous<sup>3</sup> properties of the plant.<sup>4</sup>

Frederick Hoffman, one of the most skilful physicians of any age, an ornament to all, and whose writings gave the first rational turn to medicine since its emergence from the ignorance and folly of the barbaric ages, treating of the cure of spasmodic colic or ileus says, “The smoke of

<sup>1</sup> Herbar. Horst. and Obs. Med. et Pharm.

<sup>2</sup> Cent. Obs. Med. Obs. 33.

<sup>3</sup> Hunger-quelling and thirst-quenching. These two words are very expressive, and not unnecessary to the English language, rich as it is. I trust this will be sufficient apology to critics for their introduction.

<sup>4</sup> Tractat. de Mortis occasione.

tobacco applied through a tube, is supposed to be superior to almost every other kind of remedy for procuring a passage." He cannot vouch for its good effects in this respect in human subjects, but he knows it to be of remarkable efficacy in the constipations of horses; he has known, also, some common persons instantly cured of violent gripes by swallowing the smoke of tobacco.<sup>1</sup>

So an old author says:—

We buy the dryest wood that we can finde,  
And willingly would leave the smoke behinde;  
But in Tobacco a thwart course we take,  
Buying the herbe onely for the smoke's sake.

JOHN HEATH. 1610.

Vopiscus Fortunatus Plempius, a skilful and very learned physician of Louvain, who, I may remark in passing, was the only one of all his assailants on his discovery of the circulation of the blood, to whom Harvey condescended to give an answer, expresses the same sentiments as those of Horstius, and others already quoted. His opinions on the cause of tobacco allaying the sensations of hunger and thirst however are hardly correct. He says, "this is effected by its exciting abundance of pituitous humours in the mouth, which being swallowed allay these sensations."<sup>2</sup> Monardes and Stalpertius Vanderwiel hold similar opinions; while Neander and Thonerus assign the more physiological reason of stupefaction of the sense.

Chrysostum Magnenus has great confidence in the reputed efficacy of tobacco on diseases generally, and denies what some have asserted, that the brain is ever discoloured, or structurally affected by the abuse of tobacco. He adduces many instances wherein its use had afforded the

<sup>1</sup> Pract. Med., part ii., sect 2.

<sup>2</sup> De Togatorum Valetudine tuenda, cap. 4.

most signal relief. He was in the habit of employing it in the form of an oil, which, he says, he obtained by infusion—(per infusionem); meaning perhaps, an infusion of the tobacco in oil; for I cannot understand otherwise how he could procure an oil of tobacco in this way, seeing that it yields only two oils, the concrete volatile oil obtained by simple distillation, and the empyreumatic oil procured by destructive distillation, as in the bowl of a tobacco pipe. It differed also very materially from that used by Redi, Moses Charas, and Harderus, inasmuch as he applied it medicinally with great success in various affections, such as arthritis, disorders of the kidneys, and colic.<sup>1</sup> Mr. Chippendale mentions two cases proving the great efficacy of tobacco in neuralgia when applied to the part affected, night and morning, in the form of extract.<sup>2</sup> But it appears to me that an equally efficacious application might be made with nicotina, or either of the oils of tobacco diluted with simple cerate: it would at least have the advantage of being a more elegant form, if not more eligible in other respects.

Piso, who practised in both the Indies as well as in South America, declares that by chewing tobacco the body is sustained in strength and energy as long as if it were supported by food; a fact which he experienced in his own person by chewing it while he was travelling through uninhabited regions, for he experienced neither hunger nor fatigue.<sup>3</sup> In a monthly magazine, entitled "*Reipublicæ Literariæ Acta*," formerly published in France, there is a curious account of a crazy person of the name of Isaac Henry Stiphont, who,

<sup>1</sup> *Exercitationes de Tabaco. Exercit. xi. and xvi., sect. 4.*

<sup>2</sup> *Lancet*, March 1, 1845.

<sup>3</sup> *De Indiæ Utriusque re Naturali et Medica*, lib. iv., cap.

after being shut up in the mad-house at Haarlem, began to manifest his insanity by supposing himself the true Messiah, and he declared that he would fast for forty days and forty nights. He accordingly began to put his boast in execution on December 6th, 1684, and, notwithstanding all that could be said or done to divert him from his mad undertaking, and to induce him to take food, he persevered in his voluntary fast with all the doggedness and obstinacy natural to maniacs, until he actually completed his undertaking on the 15th February, 1685. Although strictly watched, he was never observed to take the least nourishment, he only continued the use of tobacco, to which he had been accustomed, and took a little water occasionally, which he used more for the purpose of washing his mouth than for sustenance.”<sup>1</sup>

Stalpertius Vanderwiel says,—“We know from experience that many sailors and travellers who have suffered shipwreck and other disasters, have been able to support their lives, in the absence of food, for several days together by tobacco alone.” He adds, “a certain Monk relates that the inhabitants of Canada, during the famines with which they are frequently visited, often support themselves for several weeks successively with nothing but tobacco.”<sup>2</sup>

Theodorus de Mayerne, physician to Charles I. of England, advises the fumes of tobacco to be inhaled for the relief of asthma;<sup>3</sup> and Locke considers it conducive to keeping up regularity of the bowels.<sup>4</sup>

“It gives a secret delight to those who take it, says Lord Bacon, inasmuch as the persons once

<sup>1</sup> See the number for February, 1685.

<sup>2</sup> Obs. Rar. Cent. Post. P. P. Obs. 15.

<sup>3</sup> Mangeti. Bibl. Script. Med., t. ii., p. 283.

<sup>4</sup> Thoughts on Education, p. 23.

accustomed thereto, find a difficulty to leave it off; and, doubtless, it contributes to alleviate fatigues, and discharge the body of weariness. It is also commonly said to open the passages and draw off the humours; but, like opiates, it manifestly disturbs the head."<sup>1</sup>

Michael Etmuller, the accomplished and skilful physician of Leipsic, entertains the same favourable opinions as Magnenus, Monardes, Horstius, &c., of the useful qualities of tobacco.<sup>2</sup> Neander has investigated at considerable length the various properties ascribed to it, and seems to have determined them with great precision and judgment. He animadverts on the vague assertions and the irrational conceits commonly indulged in respecting its powers, advocates its proved virtues, and recommends the employment of it in several diseases. He recommends the salt of tobacco ashes as possessing wonderful power in whitening the teeth. Etmuller believes implicitly in the property which tobacco is commonly said to possess, of supporting life in circumstances where food and drink are deficient; and, like most of the forementioned authorities, he condemns only the intemperate use of it as a luxury. He also relates from Ægidius Everhardus, that the juice of tobacco has the property of counteracting poisons;—in proof of which he mentions the case of a pilfering cat to which some neighbours had given a dose of poison; and as an antidote, a bolus of tobacco leaves and butter was crammed down Grimalkin's throat.—The case ended favourably.<sup>3</sup> This notice of so valuable an effect of tobacco has been lately confirmed in America.—The cases will be given in a future page. Tobacco was used

<sup>1</sup> History of Life and Death, sec. viii.

<sup>2</sup> Tractat. de Fame Læsa.

<sup>3</sup> Tobacologia, p. 34. Lugduno-Batav. 1662.

as an antidote to the wounds occasioned by poisoned arrows among the Indians, as well as against morbid poisons, such as syphilis. Castor Duranti enumerates all its virtues thus :—

The herb which borrows Santa Croce's name,  
Sore eyes relieves and healeth wounds ; the same  
Discusses the King's-evil, and removes  
Cancers and boils ; a remedy it proves  
For burns and scalds ; repels the nauseous itch,  
And straight recovers from convulsive fits ;  
It cleanses, dries, binds up, and maketh warm ;  
The headache, toothache, cholic, like a charm  
It easeth soon ; an ancient cough relieves,  
And to the reyns and milt and stomach gives  
Quick riddance from the pains which each endures ;  
Next the dire wounds of poisoned arrows cures ;  
All bruises heals, and when the gums are sore,  
It makes them sound and healthy as before ;  
Sleep it procures, our anxious sorrows lays,  
And with new flesh the naked bone arrays ;  
No herb hath greater power to rectify  
All the disorders in the breast that lie ;  
Or in the lungs.<sup>1</sup>—————

But there is no end to the catalogue of virtues and vices ascribed to tobacco. Primirosius of Paris, positively denies, and with good reason, that tobacco smoke or anything else can penetrate into, or tinge the brain ; he rejects much of the nonsense current respecting the plant, and gives it a fair share of censure and praise where he thinks they are merited.<sup>2</sup>

Harderus observes, “ Tobacco is used variously ; some chew the leaves with impuntity, others regale themselves with the smoke, and some prepare a medicine from it superior to any antidote,” &c., &c.<sup>3</sup> Vanderwiel says, he formerly knew an old man, who, after he had lived more than a

<sup>1</sup> Hymnus Tabaci

<sup>2</sup> De Vulg. Erroribus in Medicina, lib. x., cap. 33.

<sup>3</sup> Obs. Pract. Anat.

hundred years, was supported by the Gallican Church (at the Hague), and being worn out with old age, he lay continually in bed as immoveable as a block, without taking any food or drink, so that it was hardly possible to distinguish him from a corpse, except when the *smoke of tobacco was applied to his nose*, and then by the sucking motions of his lips he gave signs of life. By the stimulus of the smoke he was soon enabled to open his mouth so far as to admit the end of a tobacco pipe to be thrust between his jaws, when by leisurely inhaling the smoke by small and repeated inspirations, he was able to hold the pipe until the whole of its contents were consumed.<sup>1</sup> Sir William Temple was in the habit of putting a leaf of tobacco into his nostrils for an hour night and morning, for disorders of the head and eyes.<sup>2</sup>

Thorius, like Etmuller, recommends the ashes of tobacco as an excellent dentifrice—

Denique mortales, quantum est, conducit in usus,  
Nec quicquam, ut suis occisi, non utile ; flammæ  
Qui superat post fata cinis rubigine fœda  
Defricat, et flavos facit excandescere dentes.<sup>3</sup>

Which is thus “done into English” by Peter Hausted—

Nothing tobacco hath but what is good,  
As of a slain sow every part is food,  
The ashes, which after the flame do ly  
As of no use, do turn to ivory  
Rusty and yellow teeth.

<sup>1</sup> Loc. cit.

<sup>2</sup> Essay on Health and Longevity, vol. 1, part iii., p. 283.

<sup>3</sup> De Pæto, lib. ii

## LETTER VI.

Ὡ τῆς παρεούσης μεγάλης ἀνάγκης τλῆναι κακὸν ἀκέσασθαι  
μιασματι κακῷ.

ARETÆUS.

THE original depravity of our nature has encumbered our inheritance with so liberal an entailment of mental annoyances and bodily ailments, whilst at the same time we have so small a chance of redemption, that we are glad to accept as an unconditional blessing, any thing that promises to mitigate or diminish the common amount of human sufferings, even when we are conscious that the properties of the boon are pernicious, and their application never exempt from danger. The sword can destroy the life it is formed to defend; and the blandest food we can choose may become the most virulent poison by surfeit. There is, therefore, no alternative left to keep us undecided; and we can only regret with Aretæus, in the epigraph of this letter, the dire necessity that compels us to have recourse to such contaminating remedies as our sufferings frequently oblige us to use. The serpent whose bite was instant death, was converted by the ingenuity or credulity of the ancients into a remedy against its own virus, as well as against some of the most formidable diseases. "*Acrium more medicorum,*" says Sidonius Apollinaris, "*qui remedium contra venena cum ratio compellit, et de serpente conficiunt.*"<sup>3</sup> The principal ingredient of the celebrated *theriaca* of Andromachus was the flesh of the viper, for the numerous virtues of

<sup>1</sup> Lib. ix., Epist. 9.



which I can only refer you to Galen<sup>1</sup> and his followers, among whom Avicenna goes so far as to assert that the constant use of vipers' flesh prolongs life, invigorates the constitution, and preserves the body in unfading youth.<sup>2</sup> As the ancients were led captive by the fascinations of the serpent, in like manner we moderns are enslaved by the seductive charms of tobacco.

You may recollect that in noticing the experiments of Redi, in a former letter, I casually mentioned an instrument which was invented in his time, by means of which tobacco smoke could with ease and good effect be thrown into the intestines. This was an important acquisition to medical science, and an ingenious and useful mode of applying all the energetic elements of a powerful therapeutic agent: and it may be affirmed the world has not been disappointed in the expectations formed of its usefulness in the practice of medicine, after an experience of two hundred years. The smoke of tobacco, which contains both its principles, is decidedly the preferable, and by far the safest mode of exhibiting this active remedy, while it is no less efficacious than the decoction or the infusion. Nor is the employment of tobacco in this way confined only to the complaints for which it was used in the time of Redi. Surgeons have found it a most useful hygeinic agent in diseases of a much more desperate character. Being a narcotic sedative of a very energetic nature, it has proved an auxiliary of the first importance in certain stages of simple and incarcerated hernia, insomuch indeed, that it is considered by eminent surgeons to be second only to the operation

<sup>1</sup> De Theriaca *ad Pisonem*; also de Simp. Med. Fac. lib. ii.; and Porphyrius de Abstinencia, lib. i.

<sup>2</sup> Canon ii., cap. de Serpente.

itself. Sydenham reckons the smoke of tobacco, strongly blown up through a large bladder into the intestines by a pipe inserted, to be the best and most effectual clyster he knows for the Illiac Passion.<sup>1</sup> Sir Thomas Brown extols tobacco for containing "three eminent qualities, sudorific, narcotic, and purgative."<sup>2</sup> Hariot says "It purgeth superfluous fleame and other gross humours, and openeth all the pores and passages of the body; by which means the use thereof not only prevents the body from obstructions, but also (if any be, so that they have not been of too long continuance), in short time breaketh them: whereby their bodies are notably preserved in health."<sup>3</sup>

Smoking is said to be decidedly salutary in damp climates, such as Holland; which coincides exactly with the statement advanced by Gregorius Horstius one hundred and fifty years ago, mentioned in a former letter. It is also recommended in spasmodic and serous asthma, and in rheumatic affections of the head and jaws, in which case it affords almost instantaneous relief. The good effects of swallowing the smoke in gripes, have been already noticed in the extract from the works of Frederick Hoffman. It is an efficacious and certain anthelmintic, or remedy for worms, especially for the small thread worm, the oxyurus vermicularis, when cautiously exhibited by the contrivance mentioned by Redi. It is stated to be also a preventive of the infection of putrid fever and plague; and Dr. Mead, in his Treatise on the Plague, recommends a trial of it, though apparently with little confidence in its efficacy.—He says "the smoking of tobacco, so much applauded by some, since it may be put in practice

<sup>1</sup> Works, Pechy's ed., p. 428.

<sup>2</sup> Vol. iv., p. 447.

<sup>3</sup> Hakluyt, vol. iii., p. 372.

without any great inconvenience, need not, I think, be neglected."<sup>1</sup> But the statement, I consider, is completely disproved by the unmitigated ravages committed annually by the plague upon the Turks, who are perhaps the most inveterate smokers in the universe.

Enemas of about one drachm of tobacco to eight or ten ounces of boiling water, have often proved decidedly useful in strangury arising from spasm: considerable loss of strength, and sometimes alarming prostration of the vital powers follows its exhibition; but the water soon begins to flow. Dr. Fowler, in his Medical Reports on the effects of Tobacco, many years ago, employed it internally in one hundred and fifty cases, and found it both safe and efficacious as a diuretic in dropsy and dysury, proving anodyne in painful cases, in ninety-three diuretic, and in forty cathartic. Bergius recommends a fomentation of tobacco leaves in paraphymosis.<sup>2</sup> Dr. Shaw of Philadelphia, employed with the happiest effects a bougie medicated with tobacco, in many cases of retention of urine arising from stricture. Mr. Earle has published several cases in proof of its efficacy in retention of urine from spasm of the neck of the bladder or spasmodic stricture.<sup>3</sup> Tobacco is also used for destroying cutaneous insects, being destructive to all that order of organized life, both in the animal world, on the skin, the hair, and in the intestines; and in the vegetable kingdom generally. Dr. Heberden thinks that clysters do very little good except those prepared from tobacco, the smoke of which is commodiously thrown up this way by such an instrument as is now commonly used by gardeners to

<sup>1</sup> Part ii., ch. 2.

<sup>2</sup> Mat. Med., vol. i., p. 22.

Med. Chir. Trans., vol. iv., p. 82.

fumigate trees in order to free them from insects, &c., (bellows similar to those spoken of by the Italian naturalist). The smoke of tobacco thus conveyed into the rectum acts very powerfully in controlling the irregular motion of the intestines, and forcing them strongly to empty their contents in a natural manner.<sup>1</sup> Dr. Elliotson extols the smoke of tobacco in enteritis and colic, and considers it is very manageable by a little apparatus for the purpose; he observes that Sydenham was very fond of this remedy, but not more than it deserved: and he knows many practitioners who now employ this remedy with very great success.<sup>2</sup> Dr. Graves recommends compresses soaked in a strong decoction of tobacco applied to the abdomen in lead colic.<sup>3</sup> Dr. Vetch recommends the infusion as an anodyne application in gouty and rheumatic inflammations of the joints, testes, and the sclerotic coat of the eye, and also in erysipelatous inflammations. The natives of India use the leaf as a suppository to excite the action of the bowels of children. Hearne relates, that in his journey to the Coppermine River he had been frequently without food for five or six days in the most inclement weather, and supported himself in good health and spirits by smoking tobacco and wetting his mouth with a little water, an effect which can only be explained by its power of retarding the usual process of decay of the tissues of the body.

Sauvages recommends clysters of the smoke in serous apoplexy.<sup>4</sup> Tobacco has been also employed with singular success to counteract the pernicious effect of arsenic on the human system, in two cases, authenticated by Dr. Eastman of

<sup>1</sup> Comment., ch. 51.

<sup>2</sup> Principles and Practice of Medicine, pp. 1047 and 1054.

<sup>3</sup> Dublin Hospital Reports, vol. iv.

<sup>4</sup> Vol. i., p. 849.

New Hampshire, United States. The subject of the first case was the daughter of Dr. Eastman, who took by mistake some arsenic which had been prepared for destroying rats. The painful symptoms succeeding led to the discovery of the cause. Without being in the least aware of the antidotal powers of tobacco against this mineral, an elderly lady present recommended tobacco to be taken merely with a view to excite vomiting. The young lady accordingly first smoked and then chewed a large quantity of strong tobacco, and swallowed the juice without its producing the slightest emetic effect. She next drank half a pint of strong infusion, but still the tobacco was without the desired effect: the distressing symptoms occasioned by the arsenic however gradually abated, and the patient had nearly recovered when the physicians arrived, who administered an emetic of sulphate of copper, which acted once; and in a few days Miss Eastman had perfectly recovered her health.

The second case was a sick female who took arsenic by mistake. In this case tobacco was employed with equal success without the exhibition of any other remedy.<sup>1</sup> Its good effects have been felt likewise in tetanus. A physician of Dublin employed it in the form of clyster repeated twice or thrice daily during eighteen days, by which the patient obtained signal relief.<sup>2</sup> It does not appear however that the case was successful. But Curling states that out of nineteen cases of tetanus treated with tobacco, nine perfectly recovered. In seven of the fatal cases the remedy had not a fair trial; and in the eighth there was organic disease of the brain. He has not succeeded in finding a single case in which, being fully and fairly tried

<sup>1</sup> Silliman's Journal, May, 1836.

<sup>2</sup> Dublin Hosp. Rep., vol. iii.

before the constitution had given way, it has been known to fail.<sup>1</sup>

In 1724, Dr. George Cheyne published a work of sterling merit as an original production ; and as it is still valuable for the salutary precepts it contains, I will transcribe his entire sentiments on this topic. He says, "Tobacco is another foreign weed much in use here in Britain, though not among the best, yet among the middle and inferior ranks of the people. For those of gross and phlegmatic constitutions, who abound in serous and watery humours, who are subject to asthmatic indispositions, who labour under violent toothaches, or are troubled with rheums in their eyes, who have cold and waterish stomachs, and live fully and freely, both smoking and chewing is a very beneficial evacuation ; drawing off superfluous humours, crudities, and cold phlegm, provided they avoid swallowing the smoke or juice, and drink nothing, but rinse their mouths with some watery liquor after it, and spit it out. But to those of meagre constitutions it is highly pernicious and destructive, heating their blood, drying their solids, and defrauding the food of that saliva which is so absolutely necessary towards concoction. Snuffing the leaves or the grosser cut in a morning will readily promote a flux of rheum by the glands of the nose, and will be of good use to clear the head and eyes."<sup>2</sup> A writer in the *Indian Medical Journal* recently affirmed that smoking tobacco has long been recommended as an efficacious remedy in difficult respiration induced by an excess of mucus in the bronchi and air cells ; that it is also the most usual and universal prophylactic means used for the prevention of fevers and other infectious diseases ; and that the bad

Treatise on Tetanus.

<sup>2</sup> Essay on Health, &c., chap. ii., sect. 18.

effects of malaria are said to be often prevented by smoking, by inspiring the mind with confidence in and belief of its efficacy. There may be something in this.

But with all respect to the author of this theory, I maintain that neither the faith in the efficacy of the remedy, nor the remedy itself, would have the smallest influence in warding off or retarding the encroachments of fever, if tons of it were smoked by the inhabitants of some of the jungles of India and Africa, and the low tidal swamps of South America. Can the salvation of a single individual from fever be traced to its influence in Bombay, Sierra Leone, or Vera Cruz? Or from plague in Constantinople, Cairo, or Alexandria? The same writer in his experience of the good effects of tobacco seems to confirm the opinions of several of the older writers before mentioned, particularly old Raphael Thorius and Castor Duranti. He finds smoking useful in curing ulcers, ptyalism, and debility induced by mercury; and also that a patient can hardly be salivated if he continue to smoke his pipe, the tobacco preventing the effects of the mercury on the system.<sup>1</sup>

Dr. Johnson thought it was a shocking thing to blow smoke out of our mouths into other peoples' mouths, eyes, and noses, and having the same thing done to us; yet he cannot account why a thing which requires so little exertion, and yet preserves the mind from total vacuity, should have gone out.<sup>2</sup> When I first read this passage I doubted whether Johnson had not been dealing in irony, but I believe he was really fond of seeing people enjoy their pipe. Hawkins states he has heard Johnson say, that "insanity had grown more fre-

<sup>1</sup> M'Gregor on the Medicinal and Prophylactic Properties of Tobacco.

<sup>2</sup> Boswell.

quent since smoking had gone out of fashion." If Johnson said such a thing, he displayed less than his usual caution and judgment; perhaps he forgot at the moment that the increase of population and the progress of refinement were proceeding rapidly during his lifetime, and that as the numbers of mankind multiply, so must the evils contingent on highly civilized life increase in their due proportions. Had he stated the contrary fact he would have made a closer approximation to the truth.

Dr. Forster recommends the custom of smoking in close cottages, and in the great populous towns liable to contagion.<sup>1</sup> He observes in another place that tobacco pipes are found to be good weather-gages. When the scent is retained longer in the air than usual, and seems denser and more powerful, it often forbodes rain and wind—this circumstance has enabled European sportsmen, particularly the English, to establish an excellent criterion of good scent for hunting. When the smoke from the pipe remains a long time in the same place, and seems not speedily to disperse, but scents strongly the surrounding air, we may then be sure of a good day for hunting. For the same quality of the air which retains the scent of tobacco, will also cause the scent of the animal to remain long after he has gone forward, and hence the dogs can hunt him longer afterwards than usual.<sup>2</sup> Dr. Sigmond says tobacco promotes the growth of the hair.<sup>3</sup>

In the present state of our knowledge of it, I believe these are the principal cases in which we are justified in employing tobacco as a medicine. But I must impress most emphatically upon the attention of all who may chance to read these observations, that the exhibition of tobacco inter-

<sup>1</sup> Observations, &c.

<sup>2</sup> Encyc. Nat. Phen., p. 65.  
Lancet, vol. ii., p. 249.



nally, either in the form of smoke, infusion, or decoction, should never be even contemplated by any but professional men. Its employment requires not only professional judgment to discern and direct when its application is necessary, but all the caution and exactitude of medical experience in its administration ; because want of due attention in applying it, or the exhibition of a dose disproportioned to the known powers of the patient's constitution, *might speedily induce the most alarming asphyxia, if not immediate death* ; the greatest caution and vigilance have sometimes failed to prevent its deadly effects. Even its external application is not free from danger, as you shall see afterwards.

The finest compliment ever paid to a lady's beauty arose from a tobacco pipe. The celebrated Duchess of Devonshire, whose beauty and goodness were the theme of every tongue, used to rally her flatterers on the infinite inferiority of their compliments, compared with one incidentally paid to her by a poor dustman ; and she used to relate the anecdote with great humour.

A dustman who was sauntering along one of the fashionable streets of London in the exercise of his calling, had just given the last squeeze to a fresh charge of his pipe, and was anxiously looking about for a light to complete his bliss. It happened that the Duchess who had been paying a visit in the same street, was stepping out of the door of the house to step into her carriage just as the dustman was stepping past, with his mind full of the ruling passion. Their eyes met,—hers beaming with beauty, youth, fire, and benevolence ; and his twinkling with hope and the desire of soon being able to attain to the consummation of his wishes. Here then accident afforded him a rare opportunity, for he might have trudged backwards and forwards from Hyde

Park corner to Stradford-le-Bow for a hundred years, without meeting with its equal ; two stars of ethereal fire, glowing with a brilliance and intensity that would inflame an icicle ; why should they not illumine a dustman's soul ? The exchange of looks was momentary, and the Duchess's foot was on the step of her carriage ; now or never, thought the amorous dustman, and, while his heart fluttered and his pulse beat high with hope, he exclaimed, " Stop, my lady, till I *light my pipe at your eyes !!!*"

Iam bona decerpsi : nunc si quae incommoda ab usu  
Obveniunt, seu sint verè, seu vera videntur  
Expeditam, longa nec vos ambage morabor.<sup>1</sup>

<sup>1</sup> Thorius, lib. ii.

## LETTER VII.

Cob.—Ods, me, I marvel what pleasure or felicity they have in taking this roguish tobacco. It's good for nothing but to choke a man, and fill him full of smoke and embers: there were four died out of one house last week with taking it, and two more the bell went for yester-night; one of them, they say, will never scape; he voided a bushel of soot yesterday, upwards and downwards. By the stocks! an there were no wiser men than I, I'd have it present whipping, man or woman that should but deal with a tobacco pipe; why it will stifle them all in the end, as many as use it; it's little better than ratsbane or resaker.—*Ben Jonson*.<sup>2</sup>

I confess I feel some reluctance to leave the delicious perfumes, medicated cups, and soothing witcheries of Circe for the dun and foggy landscape where

————— wrapt in murky clouds  
Perpetual, which nor autumn sees dispersed,  
Nor summer; for the sun shines never there:

————— νεφέλη δέ μιν ἀμφιβέβηκε  
Κυανέη· τὸ μὲν οὐ ποτ' ἔρωϊ, οὐδέ ποτ' αἶθρη  
Κείνου ἔχει κορυφήν, αὐτ' ἐν θέρει αὐτ' ἐν ὁπώρῃ;<sup>3</sup>

and through which I must lead you in pursuit of truth, even if your path should lie—

Midst skulls and coffins, epitaphs and worms.

In the preceding pages I have brought together without reserve or bias, for your instruction, every case, example, or incident which I could find in any way calculated to place in peculiar prominence the real therapeutic excellencies of tobacco. But on reviewing them I believe you will find that even the long experience of nearly three hundred years has not been able to place to the credit of this article any great amount of

<sup>1</sup> i.e. I marvel.

<sup>2</sup> Every Man in his Humour.

<sup>3</sup> Odys. xii. 73.

gratitude from Hygeia for benefits received. Even in the few virtues it is acknowledged to possess, when divested of all the supplemental gloss and colouring with which the hand of partiality may have emblazoned them; and when all mere opinions and crude theories not based upon competent data are rejected, you will seek in vain for a single advantage which is not to be found in other less dangerous narcotics; you will soon discover on the contrary that, fetor, filth, and fascination, form nine-tenths of its character, and dyspepsia or mania the results of its use. Smoking, chewing, and snuff-taking operate with singular energy on the brain, the nervous system, and the heart; they induce a sedative, stupifying, or exanimating narcotism upon the senses in proportion to the intensity of the dose, the temperament of the experimenter, or state of his constitution. When the saliva is impregnated either with the juice or the smoke of tobacco, and is swallowed by persons unaccustomed to the poison, it produces the most distressing and dangerous symptoms. When it is inhaled by the nostrils in the form of snuff, it produces considerable giddiness, an evanescent sense of intoxication, and sometimes a most depressing sickness.

It is sometimes absolutely pernicious, but always more or less detrimental to human health: nor does it produce a single well attested hygeinic effect which may not be obtained from other drugs of kindred properties, with infinitely greater safety.

Unlike any other poison, it is found to operate equally on the brain and the heart; and it may be predicated of it that it exerts its baleful influence *immediately* upon all the principal organs of the body: and lays the foundation of many grievous maladies. Its effects are the more dangerous too, that while it seduces and captivates

the senses, it makes its inroads on the constitution with the silent and insidious approaches of the snake. So deceptive indeed are its effects, that when the venom is infused, and its influences have become perceptible and urgent, every cause is blamed but the legitimate one. An author<sup>1</sup> of an exact and inquisitive turn of mind conjectures that "it is probably more extensively used to aid the purposes of robbers than is commonly believed, and there is reason to suppose that porter and other liquors sold in brothels are sometimes drugged with it."

Dr. Ogston communicated an interesting case of this kind to Dr. Christison, in which tobacco was administered to a man in whiskey, who soon afterwards died in a state of insensibility. Dr. Ogston detected Nicotina in the contents of his stomach.

Its first ravages are generally manifested on the mucous surfaces; and the lungs, the stomach, and intestines of persons using tobacco are always found more or less inflamed. The stomach, indeed, is invariably affected with a chronic form of gastritis; which explains the continual yearning for repetitions of the sedative influences of the drug to mitigate the gnawing and uneasy sensations occasioned by its acrid principle. When the habit of smoking or chewing has been confirmed, the hag Dyspepsia establishes her gloomy throne in the stomach, and thence administers her withering powers to the remotest part of the system. Envious of the blooming and florid characteristics of health, she quickly blights the roses on the cheek of youth, and replaces their freshness and beauty with a style of features more congenial to herself; she overspreads the countenance with the ashy pallidness of declining health, and impresses it with that complexional anxiety which so clearly

<sup>1</sup> Taylor on Poisons.

indicates the progress of internal mischief and the premature approaches of age. When the brain, by peculiarity of constitution, happens to be the organ chiefly obnoxious to its virulence, the usual results are dimness of sight, dulness of hearing, ringing in the ears, vertigo, general prostration, and trembling of the hands like that of a habitual drunkard ; and it not unfrequently induces paralysis and incurable mania. The heart, liver, and lungs also become weakened and vitiated in their functions, and ultimately diseased in their structure. Within the last seven years I have been witness to three fatal cases of cancer of the tongue, all accompanied with excruciating torture, occasioned solely by the use of tobacco. The symptoms of poisoning with this narcotic are nausea, vomiting, vertigo, delirium, loss of power in the limbs, general relaxation of the muscular system, trembling, complete prostration of strength, dimness of sight, coldness of the surface, a small weak and imperceptible pulse, alarming perspiration, convulsions, paralysis, impeded respiration, and death. Sometimes there is diarrhœa with violent pain in the abdomen ; in some cases there is a sense of sinking or depression in the region of the heart passing into syncope, or creating a sense of dissolution.

*Sudores itaque, et pallorem existere toto  
Corpore, et infringi linguam ; vocemque aboriri ;  
Caligare oculos ; sonere aureis ; succidere artus.*

LUCRETIVS, iii., 155.

Gerarde, who published his celebrated work the *Herbal* in 1597, shortly after the introduction of tobacco into England, reprobates therein the extravagant employment of it—"Some use to drink it for wantonnesse or rather custome and cannot forbear it, no, not in the midst of their

dinner.”<sup>1</sup> I have already explained that to *drink* tobacco, as here expressed, means nothing more than to suck in the smoke, so George Wilkins says, “Thou canst not live on this side of the world, feed well, and *drink* tobacco.”<sup>2</sup> I have observed in a former page, the custom of smoking was carried to such an excess in England in the reign of Elizabeth, that the use of tobacco was prohibited by law, “Lest,” as Camden seems to fear, that “the bodies of Englishmen should degenerate into the nature of savages, by indulging in the same luxury as that used by savages.” Referring to the time when it was introduced into England by Lane, &c., he remarks—“Ex illo sane tempore, usu cepit esse celeberrimo in Anglia, et magno pretio; dum quamplurimi graveolentem illius fumum per tubulum testaceum hauriunt, et mox e naribus efflant, adeo ut Anglorum corpora in barbarorum naturam degenerasse videantur, quum iisdem ac barbari delectentur.”<sup>3</sup> It was a saying of King James, that if he were to invite the devil to a dinner, he should have the following dishes:—a pig, a poll of ling and mustard, and a pipe of tobacco for digesture. This monarch’s opposition to the herb was conscientious as it was lasting; he avoided no trouble of mind and body to arrest the vile habit of smoking, and he never ceased his praiseworthy labours till the end of his life, although policy forced him to give it an unwilling and negative support by admitting it under a heavy duty. Many of the evils he imputed to it, however, were clearly the work of fancy, and entirely without foundation. His honest zeal for the health and well being of his subjects magnified frivolous

<sup>1</sup> Herbal, *in vocem*.

<sup>2</sup> Miseries of Inforced Marriage, 1607.

<sup>3</sup> Camden, Annal. Eliz., p. 143, 1585.

effects, and perverted his judgment with respect to the pathogenic causes of certain phenomena, probably got up and brought under his notice for the occasion. Surely, he says, smoke becomes a kitchen far better than a dining chamber, and it makes a kitchen oftentimes of the inward parts of men ; soiling and infecting them with an unctuous and oily kind of soot as hath been found in some great tobacco takers that after their death were opened.<sup>1</sup> We are assured that, influenced by this firm belief, King James actually held a public disputation in person, in one of the Colleges of Oxford, in 1605, against the mania of smoking tobacco ;<sup>2</sup> the question being, *Utrum frequens suffitus Nicotianæ exoticæ sit sanis salutaris ?* “Whether the frequent smoking of foreign tobacco was a safe practice for the healthy ;” and illustrated his discourse by adducing examples of persons who had long laboured under incurable diseases of the chest &c., &c., from the effects of this practice, in whom after death the lungs were found black and shrivelled as if they had been smoke-dried !

I have already quoted the illustrious Helmontius, who believes that it quells the sensations of hunger and thirst, and appears useful in supporting strength in long journeys, and in scarcity of food ; but that it contains an occult poison, wherefore, he execrates smoking, and declares he has found the stomach of smokers tinged yellow by swallowing the smoke.<sup>3</sup>

Thomas Bartholine, a famous Danish physician,<sup>4</sup> informs us, that in dissecting a man who, while in life, had enjoyed to excess the pleasures of the pipe—*nimia tobaci suctione*, for many years of his life, he found the left ventricle of the heart infarcted

<sup>1</sup> Counterblast, folio works, p. 221.

<sup>2</sup> Caspar Hoffman de Med. Offic. sect. iii., cap. 30.  
De Mortis Occasione.

<sup>4</sup> Hist. Anat. Cent.



with a fatty substance, the lungs flaccid and shrivelled, and adhering to the ribs, and weighing three pounds avoirdupois.

Sir William Vaughan says, "that outlandish weed" tobacco caused a dullness of the spirits, dimness of the sight, and impotence.<sup>1</sup>

Skrokus, the younger, declares the fumes of tobacco not only blacken the palate, but even penetrate to the brain, and by mixing with the particles of the blood and confusing the animal spirits there, occasion divers mischiefs, and in bilious habits *even madness*.<sup>2</sup> This, I may observe, is not an uncommon result in certain temperaments.

Simon Paulli, once Professor of Physic at Copenhagen, but afterwards Bishop of Arhusen, wrote an admirable work on the *Abuse of Tobacco and Tea*, wherein he inveighs against the use of it in any form, and proposes many excellent reasons for his strong opposition to it. He occasionally indulges in some absurd notions like the other early writers on tobacco; but upon the whole the views he takes of its use and abuse are correct. In the epistle of Raphellengius to him, inserted in his "*Abuse of Tobacco and Tea*," there is an account of a robust youth who had been an intemperate smoker, whose brain on dissection was found to be *dyed of a black sooty colour*. He also denounces it in the form of snuff, and states that many persons have become blind from the intemperate use of it; he says, likewise, that he had often known persons deprived for ever of the sense of smell, and some who had suffered the rupture of a blood vessel in the brain from the effect of violent sternutation; he seriously advises the unconditional abandonment of the habit, and warns youth not to use it unless they wish to lead

<sup>1</sup> U. S.

<sup>2</sup> *Scholia in observat*, 44 *Helvigiani*.

most miserable lives and bring on a premature old age.”<sup>1</sup> Harderus denounces the use of it with as much acrimony as Paulli; yet he admits that persons accustomed to it can enjoy it as if it were an *alexipharmic*, or even in the place of food, but that it would prove exceedingly pernicious to those not inured to its use.<sup>2</sup>

Bartholine details the dissection of a Frenchman’s brain, in which was found collected, a black indurated matter. The man had been a great snuff-taker; and Schneider<sup>3</sup> relates that Tulpius found traces of tobacco in the viscera of persons who had been in the habit of employing it by the mouth.

Augustus Thonerus, a respectable Dutch physician, gravely states that he was assured by a certain physician that on opening the head of a person who had been an excessive tobacco smoker, and who never ceased night nor day from this habit, he found, “*stupenda res!* the whole substance of the brain so dried that it scarcely equalled the size of a nut!” But he has forgotten to explain whether he means a hazel nut, or a cocoa nut. He expresses his approbation of tobacco when temperately used and properly applied.<sup>4</sup>

Theodore Kirkringius, a learned physician of Amsterdam, addresses his readers in this vein.—“A vile habit of sucking tobacco-smoke, *cacoethes sugendi fumum*, through tubes manufactured for that purpose, prevails at present (about 1607) in Europe. Now, to convince you how greatly they injure their own health who indulge freely in this habit, I shall expose before your eyes the state of a man whom I dissected in presence of a crowd of other physicians. He had been immoderately addicted to these smoky delights, for it appears he

<sup>1</sup> See also his Quadripart. Botan. Virid., cap 6.

<sup>2</sup> Obs. Anat. Pract. <sup>3</sup> De Osse Cribriformi.

<sup>4</sup> Obs. Med., lib. ii.

scarcely did any other thing but swallow the fatal juice; so that when nature, battered as it were by incessant attacks, began to give way and fall into disease, he began to throw up black matter from his lungs and stomach, and continued so until at last he also ejected his *sooty soul*. With the help of a dissecting scalpel I penetrated into, and wandered through the gloomy tabernacle she had lately abandoned; do you ask me what I saw there? I felt as if I had entered the mansion of Pluto. In the very threshold, lo! the tongue lay swollen and dyed of a black colour, and steeped as it were in the poisonous juice: and as to the trachæa, it appeared like a chimney lined with soot. The lungs were dry and almost friable; the liver, as if it had attracted to itself more of the inward burning than the rest of the viscera, was inflamed all through, and from the general incremation not even the bile in the gall-bladder was exempted, for it had contracted a purplish green colour. But among the intestines, which form as it were the ballast of the body, there had collected the whole of the black cinders of the universal conflagration; they were crammed with black matter, which emitted an odour not less offensive than Avernus itself." "These," he concludes, "are the fruits of excessive smoking."<sup>1</sup>

Professor Willis of Oxford ranks tobacco among the causes of Vertigo.<sup>2</sup> Tissot, the learned Swiss physician, affirms that the bad consequences of using tobacco are apoplexy, gout, jaundice, tabes, and other diseases of the chest. The following passage is cited both because it evidently involves the filthy habits under consideration, and also because it serves to introduce the author's decided conviction of the pernicious effects of this luxury. The late Dr. Cheyne, of Dublin, in his invaluable

<sup>1</sup> Obs. Anat.

<sup>2</sup> Anima Brutorum, de Vertigine.

work on "Apoplexy,"<sup>1</sup> treating of the causes of that affection, declares that he is persuaded there is much more in the habits than either in the original form or diathesis ; so that he ventures to affirm, that in nineteen cases out of twenty of those who die of apoplexy, the disease might have been averted or postponed by temperance. And in page 150, enumerating the habit of snuff-taking among the other causes of this disease, he says he is convinced that apoplexy is one of the evils in the train of that disgusting practice.

An assertion to the same effect was made some years ago by a correspondent of the *Sydney Herald*, which was ridiculed but not disproved in the reply of a second correspondent. The question at issue between them, however, was confined solely to the smoking of tobacco. But, as I was then discussing the effects of the general uses of tobacco, I endeavoured to ascertain whether snuff or any of the common usable forms of tobacco had ever been proved to exercise a direct influence in the production of this disease. It may be gratifying to snuff-takers to know the truth on this interesting subject. Dr. Christison, referring to the latter of the two passages quoted above from the work of Dr. Cheyne, remarks that "the statement is questionable, as the daily experience of every one must testify."<sup>2</sup> Now it is morally possible that Dr. Christison may never have met with a case in point ; but this is no *proof* that such cases may not have occurred in the practice of other physicians ; besides, his mode of confuting the statement is too vague, and unworthy so grave an authority ; for he leaves Dr. Cheyne's statement just where it was, and what it was, a probable and practical inference drawn from clinical observation. Dr. Cheyne however is not alone in his opinions,

<sup>1</sup> P. 146.

<sup>2</sup> Treatise on Poisons, p. 773.

for they are supported by the ponderous testimony of professor Lanzoni of Ferrara, who relates the case of a person that fell into a state of *coma* from taking too much snuff, and died *lethargic* in twelve days.<sup>1</sup> A case is mentioned in the Edin. Med. and Surgical Journal<sup>2</sup> where smoking produced most of the symptoms of Apoplexy, as stertor, insensibility of the pupil, deep livid countenance, and spasmodic contraction. Sauvages and Portal consider the narcotic poisons, among which is tobacco, do not produce *true* apoplexy but *carus*, which being a doctrine, no doubt drawn from their own experience, is a sufficient refutation. Here, non-medical readers may ask, what has *carus*, *coma*, or *lethargy* to do with apoplexy. You and they shall see; but in order to see and also to understand we must go to the fountain head and ascertain whether apoplexy is a disease of one unvarying type and condition, or consists of varieties or degrees.

Hippocrates, the father of physic, distinguishes apoplexy into the *strong* and the *weak*. He says, it is impossible to cure a strong apoplexy and difficult to cure a weak one. Galen considers *catoche*, apoplexy, *carus*, and *cataphora*, the same disease; but in another place he is more precise; he says, "if only the anterior part of the brain be affected, &c., the faculty of thinking is abolished, and the patient is incapable of both sensation and motion, but the power of breathing remains unimpaired, and this affection is called *carus*; but when the *carus* affects the breathing so violently that the person can hardly respire even with great effort, like those who snore in deep sleep, the affection is called apoplexy."<sup>3</sup> To this I shall only add, that almost all the subsequent writers down

<sup>1</sup> Ephem. Cur. Nat., dec. ii. an. 10.

<sup>2</sup> Vol. xii., p. 11.

<sup>3</sup> Therap. Method, xiii. 22, Loc. Affect., iv. 2.

to the time of Sauvages follow the dogma of Galen: and Sauvages himself holds almost the same opinions with respect to the identity of these affections; at least in his classification and definition of them he makes only a distinction without a difference. But every novice knows, or ought to know, that cases of what is unphilosophically called *true* apoplexy have occasionally occurred without being attended by stertor; inasmuch, as several eminent physicians, among whom Forestus, Cullen, and Portal, admit that apoplexy may happen without stertor being necessarily present. I have myself met with many cases of apoplexy without a manifestation of this symptom. Dr. Mead holds *carus* to be only a slighter form of apoplexy—*Lethargia et carus sunt leviores apoplxiæ species*.<sup>1</sup> Cullen says, “under the title apoplexy are comprehended those diseases which, as differing from it in degree only, cannot with a view either to pathology or practice be properly distinguished from it, such are the diseases sometimes treated of under the names of *carus*, *cataphora*, *coma*, *lethargus*.<sup>2</sup> Dr. Young ranks apoplexy the third species of *carus* as a genus. Dr. Cooke considers “*carus*, *lethargus*, &c., as inferior degrees of apoplexy.” Dr. Mason Good’s arrangement is somewhat similar to Dr. Young’s. Dr. Cheyne seems to consider all the class of *paraneurismic* diseases as degrees of one and the same affection. He even intimates that the same hopelessness which characterizes apoplexy, accompanies also its less urgent varieties; for he confesses that “if the reader expects satisfactory information relating to the cure of lethargy, he fears he will not be gratified.” Indeed, since it is clear the structural lesions of the brain occasioning apoplexy are the same both in the slighter and

<sup>1</sup> Precept. et Monit., cap. ii., sect. i.

<sup>2</sup> Syn. Nos. Meth. iii.

severer grades of that disease, the danger must necessarily also be the same ; the degrees probably depending partly on predisposition and partly on the magnitude or intensity of the cause ; this, however, belongs to the *Ætiologist* to determine ; my business at present being only to prove, if possible, that snuff or any preparation of tobacco has occasionally been the cause of apoplexy. And I think, after having demonstrated that according to the most eminent nosologists, apoplexy, carus, coma, lethargy, &c., are only degrees of the same disease ; and that besides the testimony of Dr. Cheyne, Lanzoni, one of the most distinguished men of his time, found snuff to have been the cause of lethargy, a form, and not the least dangerous one, of apoplexy,—my position is made good.

“I cannot help wondering,” says Ramazzini, “how the nose aping the art of cookery, happened to be so ingenious as to invent the many and various modes of seasoning and preparing tobacco, which every one employs for the gratification of his nose, some taking it in coarse powder, some in fine, some scented, and some unscented ; and not only the nose but the palate also delights in the smoke of it sucked in and puffed out again at both mouth and nose ; wherefore, as often as I see a man snuffing up this powder so greedily into his nostrils, or inhaling and exhaling the smoke, I cannot help thinking of Orlando described by Ariosto as having spilled his brains and sucking them in again by his nose.”<sup>1</sup>

<sup>1</sup> De Morb. Artif., cap. 16.

## LETTER VIII.

Ye pipe was in my mouthe,  
Ye first cloud o'er me broke;  
I was to blow another,  
When a voyce came from ye smoke:—

Come, this must be a hoaxe!—  
Then I'll snuffe if I may not smoke;  
But a voyce came from ye boxe,  
And thus these voyces spoke:—

“And would'st thou have a swimmie hedde,  
And smokie breath and blacken'd toothe?  
And would'st thou have thy freshness fade,  
And wrinkle up thy leafe of youthe?  
Would'st thou have thy voyce to lose its tone,  
Thy heavenly note, a bagpipe's drone?  
If thou would'st thy health's channels choke,  
Then smoke—smoke—smoke:  
The pipes of thy sweet musick stuffe,  
Then snuffe—snuffe—snuffe!”

ANON.

IN addition to the foregoing illustrations, Sir B. Brodie, in his experiments with tobacco on animals, has shown that it produces symptoms very much resembling apoplexy by its power of destroying the functions of the brain. In these experiments he made an important and curious discovery in respect to the influence of tobacco. He found that the empyreumatic oil confines its energies entirely to the brain, and destroys life by its action on that organ alone; whereas the infusion of tobacco, thrown into the intestines by way of injection, kills by paralyzing the heart, without acting on any other viscus.<sup>1</sup> Dr. Copeland believes in the tendency of tobacco to produce apoplexy. He says, “the use of tobacco, particularly in the form of snuff, has been considered to favour the occurrence of apoplexy,” &c.; and “connected with the use of spirituous or

<sup>1</sup> Phil. Trans., 1811.



fermented liquors, I may here allude to the influence of the class of narcotics, particularly opium, stramonium, hyoscyamus, *tobacco*, &c., the excessive use of which sometimes occasions all the symptoms of congestive apoplexy, and even extravasation.”<sup>1</sup> In France, M. Fourcroy and M. Pattissier have declaimed against the deleterious effects of snuff on the manufacturers, affirming, that it induces bronchitis, dysentery, ophthalmia, and other constitutional and cutaneous diseases. But this subject, observes Dr. Christison, has since been investigated with great care by MM. Parent du Chatelet and D’Arcy, who inquired minutely in all the great tobacco manufactories of France, comprising a population of above four thousand persons; and the results at which they have arrived are—that the workmen very easily become habituated to the atmosphere of the manufactory—that they are not particularly subject to special diseases or to diseases generally—and that they live on an average quite as long as other tradesmen.<sup>2</sup> A later commission however took a different view of its effects, and state that the men who are employed in these manufactories seem to labour under asthma and shortness of breath, that their bodies gradually assume a grayish tinge, and the constitution degenerates into a cachectic state; and later still M. Melier, who is sure that the vapors in manufactories long respired are injurious; the first effects are headache, nausea, languor, loss of appetite and sleep; the secondary are manifested by a species of cachexia indicated by an altered complexion. He attributes these effects to the *Nicotina volatilized*.<sup>3</sup> Dr. Clutterbuck and Dr. Alison also deny that

<sup>1</sup> Dict. Pract. Med.

<sup>2</sup> Annales d’Hygiene et de Medicine Legale, i. 1829.

<sup>3</sup> Brit. and For. Med. and Chir. Rev., vol. xxiv., p. 562.

tobacco exerts any injurious influence on persons employed in its manufacture. For my part I do not hesitate to express my doubts on the subject. I know from actual observation, indeed, that snuff making does exert a pernicious influence upon the health ; but I am not prepared to affirm, whether that influence depends on the tobacco alone, or on the other ingredients of which snuff is composed, namely the salt, hydrochlorate of ammonia, urine, powdered glass, and corrosive sublimate.

Dimerbroek says, that on dissecting the brain of a smoker he found it all black and ulcerated.<sup>1</sup> Stalpertius Vanderweil, referring to the abuse of snuff-taking, records the case of an old man who died from abscess in the brain, which he attributes to his having been an inveterate snuff-taker. He admits, however, that this powder taken in *due measure* and at proper intervals, is not by any means a useless medicine when the head is surcharged with humours.<sup>2</sup> Adrian Falconbergius found, in an excessive smoker, the mamillary process of the brain and the extremity of the olfactory nerve wanting. This in part explains Paulli's views, who holds that snuff destroys the sense of smell, which is probable enough ; for if the poison exert its energy upon one set or branch of nerves, I cannot understand why it may not equally affect others. Mr. Smith records two cases of paralysis of the *portio dura* produced by smoking tobacco. He is not aware of any case of paralysis of the portio dura on record having been attributed to the use of tobacco, nor indeed, does he remember seeing an account of any case of paralysis, which has been imputed to this cause. Still he thinks a result of this kind is quite in keeping with what

<sup>1</sup> Anatom., xi., 13.

<sup>2</sup> Obs. Rar. Cent. Prim. Obs., 10.

we know of the physiological properties of the oil of tobacco, and is one effect which *a priori* reasoning upon them would expect.<sup>1</sup>

“The absurd custom of smoking,” says a compiler on diet, “is extremely prejudicial, as it weakens the organs of digestion, deprives the body of many useful fluids, and has a direct tendency to emaciation, particularly in young persons, and those of lean and dry fibres; to these it is the more detrimental, that it promotes not only the spitting of saliva, but likewise other evacuations. This plant is possessed of narcotic properties, by which it produces in those who begin to smoke it, giddiness, cold sweats, vomiting, purging, and from its stimulus on the salivary glands, a copious flow of saliva. Frequent and much smoking makes the teeth yellow and black; the clay pipes are apt to canker the teeth to such a degree as to infect the breath, and produce putrid ulcers in the gums; delicate persons especially suffer from this nauseous habit, as it has a direct tendency not only to exsiccate their bodies by contaminating the fluids and rendering them acrid, and vitiating the digestion and assimilation of food, but likewise to impair the mental faculties.<sup>2</sup> Moreover, it is affirmed by Marc, that the use of tobacco occasions functional impotence,<sup>3</sup> a statement which agrees with the reason assigned by Amurath IV. for his hostility to tobacco.

Tobacco even applied externally, particularly to abraded surfaces, exerts all its deleterious power, and induces all its debilitating effects. A case is related of three children to whose heads there had been applied an ointment composed of bruised tobacco leaves and butter for the cure of ringworm,

<sup>1</sup> *Provincial Journal*, 1845.

<sup>2</sup> Willich on Diet, p. 531.

<sup>3</sup> *Diet. des Sciences Med.* t. xxiv., p. 176.

by which they were reduced to the last stage of prostration.<sup>1</sup>

A case is related by Mr. Weston, in which the expressed juice of tobacco was applied for the cure of tinea capitis, or scald-head, to the head of a boy eight years old, who died in three hours and a half after the application.<sup>2</sup>

I have already referred to some cases of tetanus wherein tobacco was believed to have proved serviceable. But notwithstanding all that has been reported from time to time of this immitigable disease yielding to the direct agency of any particular medicine, we really possess no such thing as reliable testimony. Dr. R. B. Todd, one of the greatest authorities in medicine, in his observations on the cure of tetanus, affords, I think, conclusive evidence to the contrary. He considers that tobacco undoubtedly reduces the polar state of the cord ; but produces at the same time a state of fearful depression ; and that it is likewise an unsafe and not a manageable remedy. He has seen more than one patient die, *cured* of tetanus, under this remedy.<sup>3</sup> Magnenus confesses he has seen the sight destroyed by the insane use of snuff.<sup>4</sup> Ramazzini ascribes many evils to snuff taking, "*Quales ergo noxas tum capiti, tum stomacho affigat pulvis iste ex tabaco, satis nôrunt ipsi tabacopœi, dum illum præparant.*" He adds, "I have known a great many persons reduced to a state of consumption by chewing tobacco, who flattered themselves they were consulting their health by continuing a flow of saliva from their mouths ; and they could hardly be persuaded they were ruining their health by thus exhausting the

<sup>1</sup> Ephem. Cur. Nat., Dec. 11, An. 4.

<sup>2</sup> Med. and Phys. Journ., vol. xiv., p. 305.

<sup>3</sup> Lumleian Lectures on the Pathology and Treatment of Convulsive Diseases.—*Med. Gaz.* 1849.

<sup>4</sup> Op. Cit.

salivary glands, and the whole body of their nutritious juice. So fascinating and incurable is that disgusting habit of chewing and smoking tobacco, that, in my opinion it will always be condemned, and yet always be continued.”<sup>1</sup> I remember, many years ago, a healthy and robust youth, without any constitutional predisposition, and of healthy parents and family, who went directly from the pure air of the country into a snuff manufactory somewhere about the Minories in London, to learn the trade. Some months afterwards, he applied to me for advice in confirmed phthisis; he attributed his complaint entirely to the effects of the snuff-making;—in the space of two months more he was in his grave. This fact confirms the experience of many of the older physicians. Yet, Frederick the Great lived to seventy-four years of age, although he took snuff in large quantities, and wore a *tin* pocket to hold it; but Napoleon, who also was an immoderate snuff-taker, carrying it loose in his waistcoat pocket for convenience, died at an early age, from a disease which was no doubt aggravated if not produced by snuff-taking.

Mr. Pilcher details two cases of immoderate snuff-takers who were labouring under all the symptoms of phthisis, such as muco-purulent expectorations, night-sweats, &c. The mucous membrane of the throat, epiglottis, and neighbouring parts were coated with a brown fur. The discontinuance of this noxious and abominable habit was followed by recovery.<sup>2</sup>

Santeuil the poet (Santolius Victorinus), was poisoned by snuff. A person thoughtlessly emptied the contents of a snuff-box into his wine, which as soon as he had swallowed excited violent

<sup>1</sup> Mort., Artif. cap. xvi.

<sup>2</sup> *Lancet*, Feb. 1, 1845, p. 137.

vomiting and excessive pain, and he died in fourteen hours.<sup>1</sup>

Franciscus Redi, the celebrated Italian physician, poet, and naturalist, finds tobacco to have very different effects ; for the empyreumatic oil introduced into the wounds of small animals destroys life in a remarkably short space of time, or otherwise excites the most distressing symptoms ;<sup>2</sup> and Dr. Moses Charas, a celebrated French chemist and pharmacist of his day, records the instantaneous fatality of this poison when applied to the mouth or to wounds of the viper.<sup>3</sup> Bonetus, where he notices the pernicious effects of the oil of tobacco, recorded by Redi, says, this oil is easily procured from persons in the habit of smoking, by placing a piece of cotton at the bottom of the bowl of the pipe. He has seen animals killed by applying it to a small wound, and even cats, by rubbing it lightly on their lips.<sup>4</sup>

Dr. John Davie Morries, the chemical and medical editor of the *Hortus Medicus*, observes “ that the empyreumatic oil of tobacco, which is formed whenever it is burned, and *which was first known among the Hottentots*, who poisoned snakes by putting a drop on their head or tongue, is extremely poisonous,”<sup>5</sup> &c. The traveller on whose relation of the deadly effects of this oil Dr. Morries evidently founds his conjectures, also mentions it with manifest wonder as a novelty to himself and his readers. “ One of the Hottentots,” says he, “ took out with the point of a stick, a thick black matter which he called tobacco oil ;

<sup>1</sup> Orfila Directions, p. 107.

<sup>2</sup> Osservazioni intorno alle Vipere, 1664. Esperienze intorno a diverse cose naturali particolarmente a quelle che ci sono portate dall' Indie.

<sup>3</sup> Nouvelles Experiences sur les Vipères, 1669.

<sup>4</sup> Sepulchret. Lib. iv., sect. x., obs. 16.

<sup>5</sup> Hortius Medicus, p., 211.

this he applied to the mouth of the snake while darting out his tongue, as those creatures do when enraged; the effect of the application was instantaneous almost as that of an electric shock: with a convulsed motion that was momentary, the snake half nntwisted itself and never stirred more.”<sup>1</sup> Now any one who will take the trouble of referring to Signor Redi’s works, or to those of Charas, or of Harderus, will discover something that has escaped this gentleman’s research, which, as the editor of such a work, he ought to have known; and if these pages, written at the utmost verge of the green earth, should ever meet the eye of Dr. John Davie Morries, he will learn that the discovery of the empyreumatic oil of tobacco may be traced to a period at least coetaneous with the time when the Hottentots first became acquainted with the plant. The Dutch had hardly taken possession of the Cape of Good Hope at the time Redi was making his experiments. Shakspeare, too, it is pretty clear knew something of it, and seems to ascribe the murder of Hamlet’s father to “the leperous distilment,” dropped into his ear. Dr. Paris has an interesting note on this conjecture, from a suggestion of Dr. Gray the commentator, which I shall take the liberty to transfer entire to these pages.

It seems very probable, says the note, that the “juice of cursed hebenon,” by which, according to Shakspeare, the King of Denmark was poisoned, was no other than the essential oil of tobacco.

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—Sleeping in mine orchard  
 My custom always of the afternoon,  
 Upon my secure hour thy uncle stole,  
 With juice of cursed hebenon in a vial,  
 And in the porches of mine ears did pour  
 The leperous distilment.

<sup>1</sup> Barrow, Travels in Africa, p. 268.

In the first place, the learned commentator, Dr. Gray, observes, that the word here used "hebenon" was more probably designated by a metathesis, either of the poet or transcriber, for henebon, *i. e.* henbane.

Now it appears from Gerarde, that "tobacco" was called henbane of Peru, (*hyoscyamus Peruvianus*), and when we consider how high the prejudice ran against this herb, in the reign of James,<sup>1</sup> it seems very likely that Shakspeare should have selected it as an agent of extraordinary malignity. No preparation of *hyoscyamus* with which we are acquainted, would produce death by application to the ear, whereas the essential oil of tobacco, would without doubt occasion a fatal issue. The term distilment, has also called forth a remark from Stevens, which is calculated to support this conjecture. "Surely," says he, "this expression signifies, that the preparation was the result of a distillation."<sup>2</sup>

Redi, then, as far as I can learn, is the first author who mentions the empyreumatic oil of tobacco. Moses Charas' experiments were published somewhat later. This virulent poison however was probably known much earlier than the publication of the experiments of either of these naturalists; and the knowledge of it in all likelihood was brought from America along with the plant itself, the poisonous oil remaining in the bowl of a tobacco pipe would very readily suggest the idea of distillation to men of science.

Tobacco contains four extremely acrid poisonous principles, namely, 1st, nicotina, an active, volatile,

<sup>1</sup> This is an anachronism. Almost all the commentators and biographers of Shakspeare admit the tragedy of Hamlet to have been written in 1596. Queen Elizabeth died on the 24th of March, 1603:—this play could not therefore have been written to humour any prejudice of King James.

<sup>2</sup> Pharmacologia, p. 691.



and intensely poisonous agent, of which one-fourth of a drop is sufficient to kill a rabbit, and one drop a dog. 2nd, the essential, or concrete volatile oil—which, also is an acrid and virulent poison. This constituent is obtained by simple distillation. When men smoke tobacco, snuff up the powder, drink the infusion, or chew the prepared article itself, like suicides, but without the plea of temporary insanity, they take these two deleterious principles into their system with various but very decided results. By inhaling the fumes of tobacco while smoking, a portion of *Nicotina* is introduced into the system and works its share of woe. 3rd, the empyreumatic oil, which is one of the most energetic and concentrated poisons in existence, as I have before shown, when speaking of the experiments of Redi and Charas. Happily, we have no instances of its effects on the human system in its concentrated state, but there is no doubt that what would kill a dog, would have extremely dangerous effects on a child, or a weak adult. A drop placed on the tongue would be likely to produce convulsions, coma, and extreme prostration of the vital powers. 4th, tobacco smoke, which is a combination of all the deleterious principles, namely, nicotina, the essential oil, the empyreumatic oil, to some extent, carbonate of ammonia, acetate of ammonia, soot, some gases, and a little moisture.

The following anecdote is told of Dr. Aldrich, whose excessive devotion to his pipe had become a local proverb:—One of the students of the Doctor's college, who was well acquainted with his insatiable love of smoking, having endeavoured in vain to convince a young freshman of the Dean's intemperance, laid a wager with him that he was either smoking, stopping, or filling his pipe, at that very hour—ten o'clock in the morning. The wager was accepted, and off went

the parties to the deanery—when, on being introduced, the gentleman who had made the bet, exclaimed, “I have lost my wager, I perceive,” for the Doctor was not smoking but had his hand in his waistcoat pocket. “You have won it,” said the Dean, to whom the matter had been explained; “for,” continued he, withdrawing his hand from its place of concealment, “I am filling my pipe at this moment,” his pocket being his tobacco box.

Fagon was one of the physicians to Louis XIV. In the middle of a violent harangue he was making respecting the pernicious effects of tobacco on the constitution, the orator made a pause, took his snuff box from his pocket, refreshed himself with a pinch, and renewed his denunciation.

“Every professed, inveterate, and incurable snuff-taker,” says the late Earl Stanhope, “at a moderate computation takes one pinch in ten minutes. Every pinch, with the agreeable ceremony of blowing and wiping the nose, and other incidental circumstances, consumes a minute and a half. One minute and a half out of every ten, allowing sixteen hours to a snuff-taking day, amounts to two hours and twenty-four minutes out of every natural day, or one day out of every ten. One day out of every ten amounts to thirty-six days and a-half in a year. Hence, if we suppose the practice be persisted in for forty years, two entire years of the snuff-taker’s life will be dedicated to tickling his nose, and two more to blowing it. The expense of snuff, snuff-boxes, and handkerchiefs, will be the subject of a second essay, in which it will appear that this luxury encroaches as much on the income of the snuff-taker as it does on his time; and that by a proper application of the time and money thus lost to the public, a fund might be constituted for the discharge of the National Debt.”

“Tobacco,” exclaims Burton, “divine, rare, super-excellent tobacco, which goes far beyond all their panaceas, potable gold, and philosophers’ stone, a sovereign remedy to all diseases. A good vomit I confess; a virtuous herb, if it be well qualified, opportunely taken, and medicinally used; but as it is commonly abused by most men, which take it as tinkers do ale, ’tis a plague, a mischief, a violent purger of goods, lands, health,—hellish, devilish, and damned *tobacco*, the ruin and overthrow of body and soul.”<sup>1</sup>

<sup>1</sup> Anat. Mel, part ii., sec. 4.

## LETTER IX.

O, would we be alle health, alle lightnesse,  
Alle youth, alle sweetnesse, freshnesse, brightnesse,  
Seeing through everything,  
With minds like ye crystal springe !  
O, would we be just right enough !  
Not drinke—not smoke—not snuffe ;

Then would our forward course  
To ye right be as naturall  
As it is, withouten force,  
For stones downwarde to falle.

ANON.

AFTER reading the preceding observations you can hardly entertain a lingering doubt of the baneful influence which this poison exerts upon the constitution, whether it operate at once in the concentrated form of any of its principles, as in the experiments of Redi and Charas upon the lower animals ; or in combination, by the slow and imperceptible vitiation of the system through smoking, chewing, or snuff-taking. There is no fact in the history of medicine better established than this, that tobacco in all its forms and preparations is an inexorable poison, without a single redeeming quality to palliate its contamination of the sources of health. The subject, therefore, is not only worthy of your most serious consideration, but it is supremely interesting, especially to the habitual smoker, and to him who is ambitious to be entered as a graveolent neophyte of the Mephitic goddess. If you harbour a single doubt on the matter, the experiments of Sir Benjamin Brodie ought to banish the last scruple from your mind. From them you will learn that the empyreumatic oil does not act upon the heart directly,

but upon the brain, causing convulsions and death. In a case in which one drop was applied to the tongue of a cat, it caused convulsions and death in the short space of two minutes, and on opening the body the heart was beating regularly and forcibly.

Of the effects of the infusion it appeared to him that the action of the heart stopped even before the animal had ceased to respire; and this was confirmed by another experiment, in which in a dog killed by the infusion of tobacco, he found the cavities of the left side of the heart to contain scarlet blood, while in those of the right side, the blood was dark coloured. The infusion renders the heart insensible to the stimulus of the blood; but it does not altogether destroy the power of muscular contraction, since the heart resumed its action in one instance on the division of the pericardium, and he has found that the voluntary muscles of an animal killed by this poison are as readily stimulated to contract by the influence of the Voltaic battery as if it had been killed in any other manner.

He concludes from these experiments that the empyreumatic oil of tobacco, whether applied to the tongue, or injected into the intestines, does not stop the action of the heart and induce syncope, like the infusion of tobacco; but that it occasions death by destroying the functions of the brain without directly acting on the circulation. In other words its effects are similar to those of alcohol, the juice of aconite, and the essential oil of almonds.<sup>1</sup>

These illustrations teach you all the philosophy of smoking; and throw a flood of light on the pathogenic action of diluted doses of tobacco con-

<sup>1</sup> Phil. Trans. for 1811, p: 178.

tinued on the human system. I think they fully explain the origin of nine-tenths of the nervous and dyspeptic complaints—the grey, pallid complexion peculiar to inveterate smokers and snuff-takers: and also why the abuse of tobacco in any form prostrates the powers of digestion, and paralyses the energies of the brain like the continued tipping of ardent spirits. Cullen was of this opinion.<sup>1</sup> Dr. Prout's sentiments on this, as on every other subject he undertakes to elucidate, are entitled to the very highest consideration. He is convinced that tobacco disorders the assimilating functions in general, but particularly, as he believes, the assimilation of the saccharine principle. He has never indeed been able to trace the development of oxalic acid to the use of tobacco; but that some analogous and equally poisonous principle, probably of an acid nature, is generated in certain individuals by its abuse, is evident from their cachectic looks and from the dark and often greenish yellow tint of their blood. The severe and peculiar dyspeptic symptoms sometimes produced by inveterate snuff-taking are well known, and he has more than once seen such cases terminate fatally with malignant disease of the stomach and liver. Great smokers also, especially those who employ short pipes and cigars, are said to be liable to cancerous affections of the lips. But it happens with tobacco as with deleterious articles of diet, the strong and healthy suffer comparatively little, while the weak and predisposed to disease fall victims to its poisonous operation. Surely, if the dictates of reason were allowed to prevail, an article so injurious to the health and so offensive in all its forms and modes of employment, would speedily be banished

<sup>1</sup> Cullen, *Mat. Med.*, ii. 74.

from common use.<sup>1</sup> Dr. Chapman details the case of a Member of Congress and a practising lawyer who had been one of the most healthy and fearless of men, but had become sick all over and as timid as a girl. By ordinary noise he was startled and thrown into tremulousness, and afraid to be alone at night. His appetite and digestion were gone, he had painful sensations at the pit of the stomach, and unrelenting constipated bowels. During the narrative of his sufferings his aspect approached the haggard wildness of mental distemperature. On inquiry he found that his consumption of tobacco was almost incredible, by chewing, snuffing, and smoking. Being satisfied that all his misery arose from this poisonous weed, its use was discontinued, and in a few weeks he entirely recovered. Distressing as this case was, Dr. Chapman saw others from the same cause even more deplorable. He found two young men who were brought to him for advice, in a state of insanity, very much resembling delirium tremens. Each had chewed and smoked tobacco to excess, though perfectly temperate as regards drink. They had commenced this pernicious practice early in life; "it grew with their growth" and at last induced dyspepsia, derangement of the nervous system, and the state of mania described. The Editor of the *British and Foreign Review* remarks, with great justice, in reference to these cases, that although we cannot, as yet, compete with the Americans in the practice of this disgusting vice, we see too much of it not to know that even in the small way here perpetrated, it is almost as injurious to the health of our young men as it is nauseous to the senses of their unsmoking victims.<sup>2</sup>

<sup>1</sup> *On the Nature and Treatment of Stomach and Urinary Diseases*, p. 25.

<sup>2</sup> *Lancet*, March 8, 1843, p. 226.

Dr. Mott assured Mr. Mayo of the Middlesex Hospital, that in the United States it is not uncommon to see persons whose hands tremble nervously, and whose minds are permanently affected by its baneful influence. He has also been told that many young men at Cambridge and Oxford have temporarily injured their healths in a similar way, though to a less extent: and he had known more than one instance of men advanced in life, who have been compelled to discontinue its use from its effect upon the head, producing disturbed and troubled sleep and headache.<sup>1</sup>

In Dr. Elliotson the most moderate smoking, such as three cigars a day, invariably produced extreme gastrodynia and cardialgia so as to make him quite miserable<sup>2</sup>—an infliction he richly deserved: no man is better acquainted with its deleterious effects upon others.

Dr. Waterhouse says in a public lecture he gave on this subject, tobacco is particularly injurious to thin, hectic, and hypochondriacal persons; that it creates unnatural thirst, leads to the use of spirituous liquors, increases indolence, and, above all, it is pernicious to the young, and lays the foundation of all their future misery.<sup>3</sup>

Dr. M'Gregor has seen some of the most severe symptoms follow the administration of an enema which contained only half a drachm of tobacco in the form of decoction.<sup>4</sup>

The practice of using tobacco smoke in clysters—is condemned by many eminent practitioners. Burserius says you must avoid such a remedy in apoplexy as you would a mad dog or a snake; *cane pejus et angue cavendum est in apoplexia*;<sup>5</sup> and

<sup>1</sup> *Philosophy of Living*, p. 77.

<sup>2</sup> *Principles and Practice of Medicine*, p. 1094.

<sup>3</sup> Sir John Sinclair, *Code of Health*, p. 43.

<sup>4</sup> *Lancet*, August, 1845, p. 240.

<sup>5</sup> Burserius, t. iii., p. 106.



Portal has no confidence in them.<sup>1</sup> The application of tobacco internally either in smoke or infusion requires the utmost consideration and caution, as the following lamentable case will show.

A strong man aged fifty-five, who had laboured for some time under dysuria from enlarged prostate, and more recently suffered from the presence of ascarides in the rectum, was subjected to the action of a tobacco injection made by a decoction of twelve grains of the tobacco in six ounces of water. Seven or eight minutes afterwards the patient appeared in slight stupor, with cephalalgia and unusual paleness of the face. He complained of pain in the abdomen, and his answers to questions were troubled. Two purgative injections were successfully administered. A stimulant potion was given; sinapisms were applied to the inferior extremities, and blood taken to the amount of three porringers. Paleness became more and more marked, respiration more laboured, stupor, intelligence altogether lost; convulsive movements of the arms, then of the legs, and afterwards of the whole body, which progressively augmented during six or seven minutes, and were succeeded by extreme prostration,—the patient fell into a comatose state and died.<sup>2</sup>

Sir Charles Bell, treating of a patient with strangulated hernia, says, his strength held up until the tobacco clyster was administered to him—after which he very suddenly fell low and sank.<sup>3</sup> Sir Astley Cooper has seen one or two drams prove fatal.<sup>4</sup> Dr. Copeland was present when the infusion of half a dram produced death in three minutes;<sup>5</sup> and Desault mentions a case in which

<sup>1</sup> Burserius, t. iii., p. 246.

<sup>2</sup> *Revue Medicale*, Dec. 1840.

<sup>3</sup> *Surgical Observations*, part ii., p. 189.

<sup>4</sup> *Anatomy and Treatment of Hernia*, p. 24.

<sup>5</sup> *Dict. of Pract. Med.*, p. 377.

the smoke used as an enema proved mortal.<sup>1</sup> Dr. Paris remembers witnessing a lamentable instance of this sudden death from a similar cause some years ago. A medical practitioner after repeated trials to reduce a strangulated hernia injected an infusion of tobacco, and shortly afterwards sent the patient in a carriage to Westminster Hospital for the purpose of undergoing the operation, but the unfortunate man arrived only a few minutes before he expired.<sup>2</sup> Dr. Grahl relates the case of a person labouring under *dyspepsia*, and obstinate constipation of the bowels, to whom a female quack advised an injection to be administered of more than an ounce of tobacco boiled for a quarter of an hour ;—in two minutes after receiving the enema, the person was seized with vomiting, violent convulsions, and snoring or *stertorous* breathing, and died in three quarters of an hour.<sup>3</sup> A writer in the *Ed. Med. and Surg. Journal* says, a patient of his died in convulsions after receiving a clyster of an infusion of two drams of tobacco in eight ounces of water.<sup>4</sup> A person to whom there had been administered an injection composed of a decoction of two ounces of tobacco became like one intoxicated, and died instantly.<sup>5</sup> Numberless instances of the same nature might be cited to prove, if proof were wanting, *the deleterious nature of the plant*,—and to teach the important lesson of caution to all persons using it, as well as to impress it on dabblers in medicine, of which, unfortunately, there are not a few in this colony.

A case occurred in M. Tavignot's practice which terminated fatally in fifteen minutes.<sup>6</sup> In the *Acta*

<sup>1</sup> Œuvres de Chir., t. ii., p. 344.

<sup>2</sup> Paris, Pharmacologia, p. 692.

Hüfland, *Journal of Practical Medicine*, lxxi. 4.

<sup>4</sup> Vol ix.

<sup>5</sup> Journal de Chemie Med., t. iii.

<sup>6</sup> Brit. and For. Med. Rev., No. xxiv., p. 562.

*Helvetica* is related the case of a woman to whom an injection made with an infusion of only one dram of tobacco was administered, when she was seized with pains in the abdomen, sickness, and fainting, and died after a few hours. A woman was persuaded by an empiric to use the infusion as a cure for worms. Soon after its exhibition as an enema, she was seized with violent convulsions, and died in fifteen minutes.<sup>1</sup>

Mention is made in the *British and Foreign Review* of a case in which a decoction of twelve grains of tobacco in six ounces of water used as an enema proved fatal.<sup>2</sup>

Mr. Eade of Blofield, Norfolk, mentions a fatal case. An hysterical looking girl was advised by a friend to have a tobacco clyster administered to her for obstinate costiveness. For this purpose about three drachms of common shag tobacco were boiled in a pint of water, and injected into the bowel. In about half an hour after this, she complained of faintness and feeling sick, and in about half an hour more became quite collapsed, with cold sweats, &c. In an hour and a half after the administration of the injection she died.<sup>3</sup> Thus tobacco in the hands of an unprincipled person, is more dangerous and deadly than a sword wielded by a madman.

Mr. Churchill records a case which nearly ended fatally, of a servant maid who unconsciously drank a cupful of coffee into a quart of which, while it was standing for use, a young man, without being aware of the pernicious consequences likely to ensue, had infused an ounce of tobacco. The alarming symptoms, as Mr. Churchill states, continued for six hours, after which and a great deal

<sup>1</sup> North American Med. and Surg. Journal, vol. vi.

<sup>2</sup> Vol. xii., p. 562.

<sup>3</sup> Med. Gaz., Nov. 1849, p. 823.

of medication she quickly recovered.<sup>1</sup> Mr. Howison the traveller, was nearly poisoned by inhaling the fumes of tobacco while sleeping in the cabin of a schooner loaded with the dried plant.<sup>2</sup> Sir Astley Cooper remarks that most of the cases of cancer of the lip, that fell under his care, were occasioned by the use of tobacco pipes,<sup>3</sup> an observation which I have verified frequently in my own practice in this colony especially. I have lately had two fatal cases of cancer of the tongue ascribable solely to the same cause.

As a practical illustration of these facts and observations, I subjoin some excellent remarks on the evil consequences of the immoderate use of tobacco; they comprise the body of a communication read before the British Association in 1846, by Dr. Laycock, of York, and conclude with some remarks on the same subject by Dr. Wright, of Birmingham.

The consequences of inveterate smoking are investigated as they declare themselves in the mucous membranes of the mouth and pharynx, in the stomach, lungs, heart and nervous system. In the first of these, the simplest result of excessive smoking is stated to be an inflammatory condition of the mucous membrane of the lips and tongue; the tonsils also become swollen, and if the throat be examined it will be found slightly swollen with congested veins, and streaked with mucus. The irritation extends from this part to the posterior nares, giving rise to a sensation of dryness and tickling, with discharge of thick mucus. The conjunctiva also becomes the seat of heat and red-

<sup>1</sup> Stevenson and Churchill, *Med. Bot.* Art. NICOTIANA, xxxvii.

<sup>2</sup> *Foreign Scenes*, vol. ii, p. 279,

<sup>3</sup> *Lectures on the Principles and Practice of Surgery*, &c., p. 436.

ness with lachrymation, and a peculiar spasmodic action of the orbicularis muscle, which the author states is observed on awakening in the morning.

The frequent occurrence of a dull pain in the forehead after excessive smoking, leads the author to suspect that the frontal sinuses are also affected; but these effects are trifling in comparison with the consequences which are manifested in the digestive canal. These are described to be pain on pressure in the epigastrium, anorexia, nausea on taking food, with constant desire to expectorate.

The action of the heart and lungs is impaired by the influence of the narcotic on the nervous system, but in addition to this, a morbid state of the respiratory passages is induced by the direct application of the smoke; the voice is hoarser, and a short cough arises; in one case the author thinks he has seen ulceration of the cartilages of the larynx ensue, and further states, that inflammation and ulceration of the larynx in men is almost exclusively peculiar to inveterate smokers.

Hæmoptysis is another affection described as distinctly traceable to the habit of smoking, but the author is not able to determine whence the blood is discharged, but it is brought up by "hawking," rather than coughing.

The abuse of tobacco on the heart is depressing. The individual usually complains of a peculiarly uneasy sensation about the left nipple, amounting almost to faintness. In such an example no morbid sound can be detected, but the action of the heart is feeble, and sometimes irregular. An uneasy feeling is also complained of beneath the pectoral muscles.

On the brain the action of tobacco is sedative. It appears to diminish the rapidity of cerebral action, and the flow of ideas. This the author thinks is a certain result, and he believes it is for this reason that smoking is a common habit with

studious or contemplative men. The action is different from other narcotics, as it does not dispose to sleep, but, on the contrary, excites watchfulness, and in this respect resembles the effect of green tea. Among the secondary results of smoking, the author mentions constipation and hemorrhoids, acne, blackness of the teeth, and gum-boils ; there is also a sallowness in the complexion, and a want of life and energy ; the author is not able to confirm the opinion that it impairs the sexual powers.

The action of tobacco is precisely similar in man and animals. A watery infusion of the plant, in whatever manner administered, produces in all cases a decidedly sedative action upon the nervous system. The feebleness of the heart's action so commonly observed, is due to this nervous depression, and is not induced by the independent action of the drug upon it. The essential oil of tobacco produces all the effects of the infusion. When given in small quantities, from two to five grains, twice or three times a day, mixed with food, tobacco in dogs produces a gradual and complete marasmus. Dr. Wright has remarked in particular a dragging action of the hind legs, and a loss of venereal power ; the testes become soft and shrivelled, the hair falls off, and before death, sloughing of the eyelids and blindness generally ensued. After death the blood was invariably found deficient in fibrin and red globules.

In watching the effects of the excessive use of tobacco in the human subject, Dr. Wright believes that they are precisely similar to the physiological effects above mentioned. He has observed that the nervous system especially suffers, that there has been an obtuseness of the several senses, irritability, indecision, loss of courage, weakness of muscular action, and depraved secretion. He has also commonly noticed the condition of the buccal pharyngeal membrane alluded to by Dr

Laycock, as well as the deepened intonation of the voice. He considers it as a great antagonist of the functions of the nervous system, especially in its relation to the organs of sense, reproduction, and digestion. He has known it produce a case of complete atony. He has known many cases, on the other hand, in which no harm resulted from the use of tobacco, but is not aware of any good arising from its use that could not be obtained from less objectionable means.

That it occasions a tendency to insanity there can be no question ; indeed there would not be much difficulty in proving, from the history of many lunatics in this colony and in America, that its excessive use actually induces insanity. There are many evidences to testify that it has given rise to some severe cases of delirium tremens. An instance of this kind occurred in an old man who had been an intemperate smoker many years of his life. After having smoked in one day nine segars in quick succession, he was shortly after seized with delirium tremens.<sup>1</sup>

“Reverting again,” says Dr. Webster, “to the causes producing insanity, it might be interesting to state, that intemperance, owing to the improved habits of the people in this country, did not seem so frequent an exciting cause of that malady as formerly ; on the other hand, the now prevalent habit of smoking tobacco had very much taken the place of intoxicating drinks ; and in America where intemperance, chewing opium, and smoking were enumerated amongst the causes producing mental disease, considerable attention had recently been directed to this subject. In his opinion, this filthy custom was most injurious as well to the body as to the mind ; and whether intoxication was produced by spirits, opium, or by tobacco, all were

<sup>1</sup> Philad. Med. Examiner.

abominations ; and he believed physicians conversant with mental maladies were every day becoming more and more convinced of the bad effects of this narcotic weed ; whilst in some asylums, its use amongst the lunatics was strictly forbidden.”<sup>1</sup>

In the year 1837, Mr. Shipman's attention was called to two cases of disease in the same family. The symptoms and phenomena attending them were so similar that it struck him at once that they had a common origin. The first was that of a young gentleman, D. W., a student at law, of a nervo-sanguine temperament. He had been a martyr to dyspepsia for two or three years ; he had spent a year in the Western States, and had attended the Law Lectures at Cincinnati. While at the West he had acute-ophthalmia, which was treated by active depletion, with little benefit, as his eyes, when he first saw him, were highly injected ; cornea vascular and semi opaque, and the lids granular. He applied to the doctor for the treatment of his eyes, but what most afflicted him constitutionally was low spirits, want of resolution, and general hypochondriasis. His stomach would receive food with a good relish, but the moment he had finished his meal a train of nervous symptoms came on, which harassed him for two hours, until the stomach was empty. Acidity, cardialgia, gastrodynia, palpitation of the heart, giddiness, vertigo, and fulness of the head, with the most profound gloom ; keenly alive to every feeling, he was in constant fear of death, yet tempted to commit suicide, to escape from a life more intolerable than death itself. These symptoms harassed him for months, with varying degrees of intensity, when a new symptom arose, which terrified him more

<sup>1</sup> At the meeting of Royal Medical and Chirurgical Society, May, 1849.



than all the rest. His sleep had been broken by the most horrid imagery in the shape of frightful dreams, for more than a year; but now, when the first hour of sleep came over him, he was suddenly awoke by a shock in the epigastrium, which started him in great alarm from his sleep. These shocks and startings were repeated several times in the course of the night, and as often as he fell into a slumber. They were at first confined to the epigastrium; but, after a few weeks, the sensation was transmitted to the head, which he described as more unendurable than when confined to the epigastrium. It was followed by a sensation as if a rush of blood took place to the head, and a firm conviction in his mind that he should die with apoplexy. This impression preyed upon his mind incessantly.

Mr. Shipman was often summoned in the night in great haste, and found him agitated with cold sweats, palpitation, and terrible apprehensions of immediate death. A little soothing encouragement, a dose of morphine and carbonate of ammonia, would dispel his fears and quiet his agitation, and enable him to rest the remainder of the night with tolerable composure. This state of things lasted several months, during which time he was not in a condition to pursue any kind of business, and finding that medicines only gave him temporary relief, Mr. Shipman suggested to him that tobacco might have some agency in his complaints (as he used it freely, by smoking, chewing, and snuffing), and advised him to abandon the habit. In this he was successful, so far as chewing and snuffing were concerned; but he was so attached to his cigar, that it was a long time before he could be induced to leave that. "I will here add," continues Mr. S., "that from the time he left the habit of chewing and snuffing, his health in some measure improved, particularly the shocks and epigastric sinking. He

now became satisfied that this partial abandonment of the habit had been productive of good, and renounced the habit entirely ; and the nocturnal shocks and epigastric sinking, with the whole train of nervous affections, vanished as if by magic. His digestive powers gradually improved ; the chronic inflammation of his eyes yielded readily to appropriate treatment ; the gloom and despondency which had oppressed him as an incubus, cleared away ; the nervous palpitations and rushings of blood to the head subsided, and he was able to prosecute his studies with energy, was admitted to the practice of the law, and is now an able and talented member of the bar, in the possession of good health, spirits, and prosperity. The foregoing history I copy from my notes taken at the time. There were many other symptoms which are common in dyspeptic cases, and many of those described are found in every day practice in nervous dyspeptics and hysterical habits. The sudden and complete cure of all the symptoms, on leaving off the use of tobacco, was too obvious to escape the observation either of patient or physician."

Mr. Shipman next briefly alludes to the state of a sister of the gentleman whose case he has been describing, although not occurring in the order of his notes. "She was married, and the mother of two children ; her age, 39 ; dyspeptic for the last ten years ; of a nervo-sanguine temperament ; her youngest child ten years of age. Suffered since her last accouchement, from leucorrhœa, partial prolapsus uteri, and hypochondriasis. Has smoked and snuffed tobacco for the last fifteen years ; eight years ago began to have shocks of the epigastrium, with a sinking sensation at the pit of the stomach, cardialgia, acid eructations, a sense of rushing of blood to the head, palpitations, sleeplessness, and startings when first falling into slumber. These kept increasing upon her, when

there came on tenderness of the spine, along its whole length, but more especially in the cervical and lumbar regions; rigidity of the limbs, costiveness, derangement of the catamenia, &c. She has been under treatment for a long time, with little or no benefit. To soothe her feelings, she had taken more freely of snuff, and had smoked more often, as she fancied that it gave her temporary relief. Seeing the good effect from abandoning the use of tobacco, in her brother, she made the same experiment in part herself, and with the same marked relief from many of the symptoms. The shocks at the epigastrium left, her sleep became quiet, her mind more cheerful, and the epigastric sinking, cardialgia, acidity, and eructations, were greatly relieved. The spine, however, required cupping and counter-irritation, and, with the use of anodynes and tonics, she recovered a comfortable state of health. This patient has frequently ventured upon a moderate use of tobacco since, but, after using it a while, she experiences, though in a slight degree, her old feelings, and then quickly abandons it. She is perfectly satisfied of its pernicious influence upon her constitution, and, therefore, is in little danger of carrying its use again to excess."

"S. E., æt. 40, was in possession of good health until 1838, when he began to emaciate, and grow pallid; his food did not digest well—with acidity, heartburn, gastralgia, palpitation of the heart, sinking at the pit of the stomach, and a host of nervous symptoms, gloom, hypochondriasis, and apprehensions of sudden death. But what amazed him, and filled his cup of misery full, was shocks at the epigastrium, which attacked him when first falling asleep every night. These followed him two years, and increased to such a degree that his sleep was a succession of starts, which nearly wore him out. At the end of two years they came

upon him during the day; he described them as like shocks of electricity, and confined to the epigastrium. He was incapacitated from business of any kind, was weak, irresolute, and desponding; had consulted many physicians, and taken a great variety of medicine, with only temporary relief. On his giving me a history of his case, I was struck with its similarity to that of D. W., and inquired if he was not in the habit of using tobacco. He stated that he was, and had sometimes imagined that it might have some agency in producing some of his bad feelings, but had never had any physician advise him to leave it off, and, in reality, was too much a slave to its use to lightly make the sacrifice. Upon my assuring him that the symptoms and disease depended upon the habit, and that nothing but a complete and total abstinence from it would restore him; I extorted a promise that he would lay it aside a month at least. As he was costive I prescribed the compound syrup of rhubarb, and directed him to call again in a month. At the end of that time I was agreeably surprised to witness the improvement in the appearance of my patient. His countenance, which had previously exhibited a sallow, palid aspect, was now ruddy with health and strength; he had gained fifteen pounds of flesh in the time, and his strength had increased daily from the time I last saw him. But what to him was more than all the rest, the annoying shocks, with the general nervous agitation attending, had entirely left him from the third day of his abstinence from tobacco. The dyspeptic affection, the palpitation, the gloom and depression of spirits, the apprehension of death had vanished as if by enchantment. He had resumed his business (that of a farmer); he could now sleep quietly through the night, and get up in the morning refreshed and buoyant in spirits, and is so convinced that tobacco was the root of all his previous

complaints, that it requires no advice to induce him to for ever refrain from its use. This man has now the most perfect health, and has taken no medicine since the first month."

"C. P., æt. 43 ; nervo-bilious temperament, farmer, temperate ; has been a tobacco chewer for twenty years, has been dyspeptic the same period, more or less, attended with nervous palpitation and acidity, hypochondriasis, and epigastric sinking. First began to have shocks at the epigastrium in 1839 in the night, on first getting asleep, which started him up in great agitation and alarm ; was frequently obliged to get up and sit for fear of the shocks. On his consulting me, I advised him to discontinue the use of tobacco, and prescribed no medicine ; he left it off and the shocks immediately subsided. He did not resume the use of tobacco again for eighteen months, and was healthy during the time. Being of an irresolute disposition, he resumed its use again, and in two months the shocks began with great severity, They were now felt in the chest and region of the heart, at first always in the night, but after a time in the day-time, with a rushing of blood to the head, which would momentarily deprive him of consciousness. The shocks now took place in the head ; this so terrified him that he earnestly besought me to prescribe something for him, and agreed to abide by my advice. My opinion was, that no medicine would be of the least service without a complete abandonment of tobacco ; this he solemnly promised he would do. I prescribed the compound syrup of rhubarb with the ammoniated tincture of valerian ; the shocks at once left him, his sleep became quiet, his dyspeptic symptoms disappeared, his mind became calm, spirits elastic, and he was capable of working his farm. Two or three times since he has cautiously ventured on the use of tobacco, but after

a certain length of time, his old feelings begin to appear; so that it reduced to a demonstration that tobacco was the sole cause of his former troubles. This man has increased fifteen pounds in flesh, and his colour from being sallow and pale, is of a ruddy hue."

"S. C., æt. 63, farmer; robust and healthy, until four years ago, when he began to complain of epigastric sinking, sleeplessness, palpitation, irritability, and nervous tremours. Shocks at the epigastrium came on at the first hour of slumber, which were repeated several times in the course of the night, and often in the morning before breakfast. Has been a tobacco chewer thirty years, and a portion of the time to great excess. On his consulting me, I suggested that tobacco was the agent in all the trouble which he experienced. He said he had often suspected it, but had never had fortitude and resolution to forego its use, but agreed to make a trial. The shocks immediately left him, together with all the train of nervous affections; his sleep became calm, his strength and flesh returned, his spirits improved, and he has gained twenty pounds of flesh in three months. He has not resumed the use of tobacco. This man was temperate in all things except tobacco, neither using tea nor coffee. He was sensible for years that something was wrong, but could not believe that an article in such universal use as tobacco, and one which he had used for a long series of years, could possibly cause his troubles. This, I am persuaded, is the case with hundreds who are similarly situated."

"S. J., æt. 54; nervous temperament; farmer by occupation; has been in the habit of using tobacco for ten years. It frequently has salivated him. He spits much, is emaciated, nervous and hypochondriacal. The shocks commenced about two years ago, in his bowels. They came on in

the night, when first getting into a drowse ; ta length they came on in the day-time, with epigastric sinking, costiveness, and dyspepsia. I put him on the use of the compound syrup of rhubarb and ammoniated tincture of valerian, and, at the same time, he left off the use of tobacco. The shocks immediately left him, and he improved gradually, so that at the present time he is in comfortable health."

"A. C., æt. 27, is of a sanguine temperament and robust habit ; a farmer by occupation. Has chewed tobacco for four years to excess ; was taken in the summer of 1841, suddenly, with sinking at the pit of the stomach, and faintness, which obliged him to lie down in the field. Shocks at the epigastrium came on about the same time. These were first at night on getting asleep ; but after a while in the day-time ; at these times he would suddenly break out into a profuse perspiration. His digestion was tolerably good, and his health otherwise little impaired. He says, that previous to these symptoms, he had used large quantities of tobacco, but never imagined that it could hurt him. I advised him to immediately discontinue its use, which he did, and the shocks and fainting left him at once, and have never returned. This man took no medicine."

"Rev. Mr. H., æt. 30 ; of a nervo-sanguine temperament ; addicted to the use of tobacco fifteen years. For many years he was troubled with epigastric sinking, and lately with shocks in the same region. He is in tolerable health in other respects, and, but for the annoyance which they occasion him when first getting asleep, would not think of asking medical advice. I recommended him to quit his tobacco, which he did, and a perfect cure was the result."

"J. S., æt. 40 ; of a nervo-billious temperament ; followed the sea many years ; commenced smok-

ing for spitting up his food; soon commenced chewing, and carried it to excess, often using a pound a week. Five years ago, began to feel a sinking sensation at the pit of the stomach; then starting from his early slumbers, with a shock through the epigastrium, and sometimes chest; a rising sensation like an aura, to his head; oppression at the chest great, and sudden difficulty of breathing, palpitation, choking, sudden faintings, unquiet sleep, frightful dreams, dyspepsia, and hypochondriasis. From being strong, robust, and resolute, he became weak, nervous, and timid. In this condition he applied to me for advice. It was with great difficulty that I could persuade him to quit his tobacco, and, when he attempted it, was often a backslider. But soon he perceived the good effects, and was at length induced to lay it entirely aside; and with it went all his former bad symptoms. I have since ascertained that he was somewhat addicted to the use of ardent spirits, which may have contributed in a measure to some of the complaints."

"*Remarks.*—I might multiply cases, that have fallen under my observation, to demonstrate the fact that tobacco is capable, in certain constitutions, and under certain circumstances, of producing a specific set of phenomena, which are peculiar and pathognomonic. All the symptoms are more or less attendant on dyspepsia, hysteria, and hypochondriasis. But the shocks at the epigastrium are so prominent a symptom, and so uniformly left when tobacco was abandoned, as to constitute a striking peculiarity. The habitual use of any narcotic is liable to produce derangement of the digestive organs, and through that, a long train of nervous derangements, which baffle the skill and tire the patience of the physician. The digestion once impaired, the great nervous, or ganglionic system takes on a chain of sympa-



thies, which are often at a distance from the first organ affected.

“ The habitual use of tobacco, when not carried to excess, does not always produce disease, and perhaps we may say that it does not generally do so. From the nature of the substance, and its peculiar narcotic properties, an individual cannot start off at once on a free and liberal use of it. Nature has so fashioned us, that when we transgress her bounds (especially in reference to tobacco), we are reminded, by nausea, of the extent we are allowed to go. If it were not for this, how many would destroy themselves before a habit could be formed, rendering its employment so safe that large quantities can be taken almost with impunity. It is the same with all narcotics. Opium, for instance can be taken, if a habit is once established, in immense quantities, and apparently with little harm; still, there are constitutions that have long held on under the use of narcotics, that will receive gradually, and almost imperceptibly, an injury which nothing can remedy, so long as the pernicious habit is persisted in. This is emphatically true as regards the use of tobacco. The martyrs themselves little suspect the secret enemy that is sapping the foundations of health and life. They have been accustomed to it, perhaps, from childhood. Their grandfather, father, and brothers, have used it before them. They never heard a word spoken in disparagement of it, and their own inclination is a powerful advocate for the pernicious article; perhaps, too, their physician has spoken a good word in favour of their common friend, which has done much to establish it still stronger in their good graces. They may, however, now and then have misgivings, as they lay awake night after night, taking an inventory of their wretched feelings; but this is laid to the charge of dyspepsia,

or the wear and tear of business, until finally they ascertain the true cause, or some acute malady comes to their relief, which, while it lasts, compels them to abandon (for a while, at least) the article, while nature re-asserts the violated laws.

“As a general rule, those who use tobacco to excess are much troubled with wakefulness; and when they do sleep, it is not “tired nature’s sweet restorer,” but a succession of broken slumbers, interrupted by startings and disagreeable dreams. Excessive smoking has been known to produce a state of the system in all respects similar to delirium tremens. Most of the narcotics, I believe, when habitually indulged in, render sleep broken and disturbed with dreams of frightful imagery.”

## A COMPARISON.

### LETTER X.

Ne tibi pallentes moveant fastidia eaules.

MARTIAL.

Pallidus offertur misero tibi caulis.

JUVENAL.

I WISH to make a digression here. I feel a strong desire to relieve my lungs from a sense of indescribable oppression; let us, therefore, emerge from the noxious and depressing atmosphere which we have been so long respiring, and make a short detour to the classic regions of Hellas, inhale for a while the pure and bracing air of the mountains of Attica, and then return by the Seven Hills of the Eternal City. The excursion will combine the *utile dulci*; it will be both salubrious and amusing, although our ramble should extend no farther than the kitchen-gardens of the primitive citizens of those two famous states. If you can find "sermons in stones, and good in every thing," you cannot fail to find something palatable in a cabbage.

This king of vegetables is a perfect analogue of our idolized tobacco. In its moral history it will bear a close comparison with that of the Indian weed. All things considered it is of equal insignificance; it was once encumbered with a similar disproportion of praise, and regarded with the same universal respect; it only differs from it in possessing in a small degree the quality of usefulness. After treating you, then, with a dish of krambé served up in the old style, I shall return recruited to my subject.

At present this vegetable forms at most a wholesome adjunct to other dishes ; but it is of so little real value in itself as an article of substantial diet, that it could but ill supply the place of any kind of nutritive food. Eaten alone, without flesh-meat or the like, it only mocks the cravings of hunger ; and taken with substantial aliments it is a mere diluent ; a thousand pounds weight of it contains almost nine hundred of water, and it requires seven hundred pounds weight of fresh cabbage to supply the place of one pound of wheaten bread. In a medicinal point of view it may be considered as an inferior sort of epicerastic.

Its value was far otherwise estimated by the ancient voluptuaries of Greece and philosophers of Rome. In those jovial days of comptations and festivity, when Bacchus with the satyrs and nymphs tripped it on the light fantastic toe, and by their joy-inspiring example taught gloomy mortals how to smooth the wrinkled brow of care, this vegetable was held in extraordinary esteem at the revels of the Bacchanalian—its presence there was absolutely indispensable, as it served in the momentous two-fold capacity of general prophylactic against ebriety, and exorcist of *blue devils* ; which is the true meaning the divine Plato attaches to the word *κραίπαλη*.<sup>1</sup> Nor was it less in vogue as a panpharmacon ; there was not an evil in Pandora's box which it did not utterly annihilate. It had a more general character among the Romans than the Greeks, but an equally high reputation.

The confidence which the ancients placed in its powers is almost incredible, and nothing affords a better illustration of the influence of taste and custom than the fact that its reputation remained

<sup>1</sup> See Sympos. *sub initium*, where the guests are discussing how they should drink their wine.

untarnished through the rise and fall of a hundred states. Its fame was mature at the infancy of the greatest empire the world ever beheld, and it outlived its wreck more than a thousand years. The Greeks regarded it with a degree of veneration bordering on superstition. Extravagant encomiums on its properties and uses may be read in the works of every Greek and Roman physician, naturalist, retailer of anecdotes, and writer of dramas from the era of Pythagoras, A.C. 540, to that of Paulus Æginetain the seventh century. You will find it eulogised by Roman authors from the birth of their Commonwealth till the last of the Cæsars. And after the decline of classic literature in Europe you will see its remarkable qualities emblazoned in all the beauty of eastern amplification by the Arabian writers on medicine and dietetics from the time of Isaac the Jew about the 5th century, until the epoch of the restoration of ancient medical literature in Europe by Constantinus Africanus in 1060; after which its fame floats in calm undiminished lustre down the stream of mediæval writers, until its glory becomes all at once extinguished towards the end of the last century.

The theory that it cured all diseases, dissipated crapula, prevented intoxication, preserved the constitution, &c., &c., the silliest and perhaps most untenable that ever was proposed to human credulity, reminds one of nothing so much as the wild rhapsody of Castor Duranti on tobacco; yet it existed as a general dogma, and was received even by philosophers with the confidence due to a first principle, for a space of perhaps three thousand years. We can trace it holding a conspicuous place in one of the oldest customs of Athens, which was probably coeval with the city itself. The festival called *amphidromia*<sup>1</sup> or *running*

*round* the fire was religiously observed from time immemorial on the fifth day after the birth of a child. On this occasion the cabbage was always present as a principal member of the ceremony. It was first fried in oil and then given to the mother; from that time it formed a leading article of her diet during the period of nursing, in order to increase the secretion of milk. It is thus mentioned by Ephippus in his verses on this custom:—

Ἐφειν τ' ἐλαιῳ ῥάφανον ἡγλαῖσμένην.

Timæus declares that the Sybarites, before they began to mellow their clay with the blood of the grape, always fortified their stomach against its effects by eating cabbage.<sup>1</sup> Aristotle and his pupil Theophrastus both acknowledge the anti-crapulous properties of the cabbage.<sup>2</sup> Cato the elder is its stoutest champion among the Romans; with him there is no disease it will not prevent or eradicate.<sup>3</sup> Dioscorides<sup>4</sup> and Pliny agree in stating that “it prevents intoxication if it be taken at the commencement of a swill; and eaten at the finish it dislodges blue devils.”<sup>5</sup> Athenæus informs us that the Egyptians were wine-bibbers of which this is the proof—that among them alone it was an established custom (ὥς νόμιμον) at their feasts, not to taste food until they had first eaten cabbage and thus prepared themselves for their computations.<sup>6</sup> He adds, “many persons eat even the seeds of the plant before wassail to preserve them from ebriety.” It appears indeed, that whenever wine was drunk to any extent cabbage was eaten to counteract its effects. Their bane and antidote were both before them. But they amplified on the example of old

<sup>1</sup> Athen, in Deipnos. lib. ix.

<sup>3</sup> De Re Rust., cap. 156.

<sup>5</sup> Nat. Hist., xx., 9.

<sup>2</sup> Problem., iii., 17

<sup>4</sup> Lib. ii., 33.

<sup>6</sup> Athen. Deipnosophi., 1.

Mithridates,<sup>1</sup> that bravest of men, whom no poison could destroy from the habit of taking it with its antidote, they took the antidote both before and after they swallowed the poison.

"O wife!" cries Eubulus, "bring me some cabbage to relieve these horrors." "There is no remedy," says Amphis, "so effectual in drunkenness as the sudden occurrence of an accident, for it arrests in a wonderful manner the delirium of intoxication, the cabbage itself is not more efficacious." But Cato who loved to "warm his old heart with a glass" says it is good for everything—*ad omnes res salubre est*. He adds a precept which every tippler and epicure should treasure up in his mind, for Cato is a great authority on the subject.—His words are, "*Si voles in convivio multum bibere cænareque libenter, ante cœnam esto (eat) crudam (brassicam) quantum voles, ex aceto; et item, ubi cænaveris, comesto aliqua quinque folia; reddant te quasi nihil ederis biberisque, bibesque quantum voles.*"<sup>2</sup> It is evident from this that Cato knew indeed, *mero caluisse virtus*.

Similar doctrines are inculcated by Galen,<sup>3</sup> Oribasius, Ætius, Alexander Trallianus, and Paul of Ægina. Alexander, like Galen, recommends it both externally and internally. Speaking of the cure of headache produced by wine he prescribes cabbage leaves softened in hot water to be bound on the head.<sup>4</sup>

The sentiments of Hali-Abbas coincide precisely with those held by the Greeks and Romans on the powers of the cabbage;—he recommends large fleshy cabbages for crapulous headache arising from intoxication; and observes, that it prevents

<sup>1</sup> Profecit poto Mithridates saepe veneno.

Toxica ne possent sæva nocere sibi.—*Martial*, v. 77.

<sup>2</sup> De Re Rustica, cap. 156.

<sup>3</sup> Κατὰ τόπους.

<sup>4</sup> Lib. v., c. 10.

the gross fumes of wine from *ascending into the brain*.—"Sherris sack *ascends me into the brain*," says Falstaff.

Constantinus Africanus one of the founders of the celebrated Schola Salernitana, expresses the same sentiments as those of his predecessors.<sup>1</sup>

Petrus Crescentius in 1225, records its wonderful properties.<sup>2</sup> Lævinus Lemnius in 1550, places its virtues among the hidden mysteries of nature.<sup>3</sup> And thus the fame of its qualities is kept in a blaze by eminent writers till the end of the eighteenth century. Camerarius, and, if I remember right, Fabius Colonna, also Gerarde, Matthioli in his Comm. on Dioscorides, Etmuller, Thomas Bartholine, Frederic Hoffman, and Dr. Robert James, are all enthusiastic admirers of the virtues of the cabbage. Some of these eminent men even give credit to the mutual antipathy which was affirmed by Androcydes to subsist between this vegetable and the vine; and maintain its power both of dispelling crapula and preventing ebriety. Thomas Bartholine extols it in a strain of fervour which almost transcends the encomiums of Cato Major. After dilating on the abundance and quality of the cabbage of his native country he observes,—“On this account when a certain foreign physician came into Denmark with a design to settle and practice there, and saw the gardens of the country people so well stocked with cabbage he prognosticated with good reason that he should meet with little encouragement in that part of the world.”<sup>4</sup>

It would well repay your trouble to peruse both the chapter quoted, and the following one of Cato's little treatise de Re Rustica, where you will find

<sup>1</sup> Loci Comm, lib. v., c. 95.

<sup>2</sup> De Agricultura, *in vocem*.

<sup>3</sup> De Occult. Nat. Mirac., ii., 48, and iv., 10.

<sup>4</sup> De Medicina Danorum Domest., Dissert. 1.



an eulogium on the properties and various uses of the cabbage as a medicine and an article of diet, which completely obumbrates anything to be met with except the systematic puffs of Scribonius Largus and his plagiarist Marcellus the Empiric.

We cannot, however, justly compare the simple and frugal times of Cato the elder, or even those long posterior to him, with the exuberant and luxurious paraphernalia of our own tables. In the days of Cato there is no doubt the cabbage occupied the place at the Roman tables which is now so well supplied by the potato at ours. It was therefore entitled to an appreciation commensurate with the value of those articles of food which we possess in such abundance. I believe indeed we can form but a very imperfect conception of the real worth of this vegetable to them, for whilst its praises are sounded in strains which might appear ridiculous to modern ears, it is but justice to suppose their encomiums were no more than proportionate to their experience and conviction of its worth. A hungry king now-a-days might feel some reluctance to feast on a dish of cabbage; but in former times it seems to have been cultivated as much for the use of the king as of the beggar, and was enjoyed no doubt with equal relish by both; we are told by Columella,<sup>1</sup>

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toto quæ plurima terræ  
Orbe virens pariter plebi, regique superbo  
Frigoribus caules, et veri cymata mittit.

That herb which o'er the whole terrestrial ball  
In great abundance flourishes for all;  
Yields the poor peasant and the haughty king  
Cabbage in winter,—juicy sprouts in spring.

Drusus Cæsar following the corrupt example of the cook Apicius despised the cabbage and

<sup>1</sup> Lib. x.

treated it as vile food, and his father Tiberius gave him a severe lecture for the depravity of his taste.<sup>1</sup>

As a further proof of the high esteem in which this pot-herb was held in the good old times, we are informed by several of the poets, &c., quoted by Athenæus<sup>2</sup> that it was considered sacred, and an object by which persons sometimes swore. Nicander in his Georgics says, "the ancients called the cabbage the prophet (*μάντις*) of the pot-herbs." Menander calls the cabbage sacred; and it is thus spoken of in the Iambics of Hipponax — "The bending suppliant *adored the seven-leaved cabbage*," &c. "I swear by the cabbage," says Ananius, "that of all men I love thee most," &c., &c.; and Athenæus assures us "there was no absurdity in this, since Zeno the founder of the Stoics, in imitation of Socrates' mode of swearing *by the dog*,<sup>3</sup> swore *by the caper*," &c. Pliny<sup>4</sup> says, in consideration of its value Chrysippus the physician and Dieuches wrote each an entire work on the uses of the cabbage and its adaptation to the several members of the body according to their diseases. He adds that during the space of six hundred years from the building of the city, the Romans cured every disease and healed every sore with the cabbage alone." "Sententiam (Catonis) vel eò diligentius persequi par est, ut noscatur quâ medicinâ usus sit annis sexcentis Romanus populus." But it must be observed here, that during this long interval the Romans had not the benefit of a single physician in the whole of their territories; so that on one occasion when the city had been ravaged by a pestilence for three years without intermission,—"Triennio continuo vexata pestilentia civitas nostra,"<sup>5</sup> they

<sup>1</sup> Plin., xx. 19.

<sup>2</sup> Deipnos. ix.

<sup>3</sup> Plato in Apol. Socr.

<sup>4</sup> Lib. xix., 9.

<sup>5</sup> Valer. Max., i., 8.

were under the necessity of bringing the image of Æsculapius, or, as others say, the god himself in the shape of a large brown serpent, from his temple at Epidaurus to Rome to cure the plague.<sup>1</sup>

But you will be surprised when you learn the cause of this absurd belief. The origin of the general confidence in the anti-crapulous virtues of the plant is involved in the same web of mythological perplexity which mystifies most of the early history of Greece. Let us, however, endeavour to disentangle it so far as to elucidate our subject,—it is always worth the labour to trace effects to their cause. Virgil accounts the man happy who can do so :

Felix qui potuit rerum cognoscere causas.

The Greeks say that Jupiter being once placed in a dilemma at having to explain two oracles which contradicted each other, laboured so hard to reconcile them that the perspiration dropped from his divine face, and falling upon the ground produced a cabbage on the spot. This is a very good apologue, but what Cassianus<sup>2</sup> tells us in his Georgics is more poetic, that Lycurgus was bound to a vine by Bacchus, as a punishment for his impiety in cutting down all the vines in his kingdom, and that *from the tears he shed on the occasion there grew up a cabbage*. Hence the antipathy which has subsisted ever since between that vegetable and the vine.

Plutarch in his Ethics glances twice at the story of the cutting down of the vines: the true state of the case, however, seems to be as follows. The Thracians of old as every body knows were celebrated drunkards from time immemorial, and many allusions are made by the ancient poets to

<sup>1</sup> Livius, x., 47.

<sup>2</sup> Γεωπονικα, lib. xii. c. 17.

this character of them. Horace<sup>1</sup> denounces their drunken brawls thus:—

Natis in usum lætitiæ scyphis  
Pugnare, Thracum est.

'Tis the Thracians' delight  
To drink and to fight.

Now this Lycurgus the son of Dryas, the son, I believe, of Bellerophon, which by the way carries back the celebrity of the cabbage to near the time of the Trojan war, was an ancient king of Thrace, who being scandalized at the immorality of his people and the despicable condition to which they had reduced themselves and his kingdom by their continual debaucheries, and determining to put a stop to their degrading habits, ordered every vine without exception throughout his dominions to be rooted up; some<sup>2</sup> say cut down, Ovid gives him the epithet *bipenniferus*, which implies that he cut them down, but either way will do. *These are the facts*, and they show him to have been a good and well-meaning though impolitic king; yet every one appears to blame him for his virtue. Virgil notices him as a crabbed old fellow in the following lines:—<sup>3</sup>

Terra procul vastis colitur Mavortia campis,  
Thracæ arant, acri quondam regnata Lycurgo;

and Propertius in his *Elegy to Bacchus*,<sup>4</sup> calls him a madman.

Vesanumque novâ nequicquam in vite Lycurgum.

Plutarch also blames him for his folly and impiety; because, as he says, he could have better effected his purpose by introducing the Water Nymphs; that is, by teaching his people to drink

<sup>1</sup> Od. i., 27 l.  
Æneid, iii., 15.

<sup>2</sup> Apollodorus, iii., 5.  
<sup>4</sup> iii. E. 15, 23.

pure water instead of wine. Our business however is only to notice that this transaction of Lycurgus was too true, too naked to suit the delicate tastes of the Greeks, they therefore threw over it a mythic mantle, and it is on the myth of a cabbage growing up from the tears of Lycurgus that the gist of the theory rests. For it was natural for the Greeks to conclude that the cabbage, which owed its birth to his tears shed on the occasion of his punishment for violating this plant, would entertain an implacable enmity to the vine, and take every opportunity of insulting and annoying it; at least the wise Greeks took such for granted, and at once adopted the creed; and this belief whelped a hypothesis as absurd as the fable, "That no vine will grow where a cabbage is planted." Theophrastus<sup>1</sup> to whom it is ascribed, says or hints, that the vine flies from his enemy as long as he has breath to run, because the olfactory nerves of the vine are exceedingly incommoded by the stench emitted by the cabbage; on this account, Timæus, Theophrastus, and half-a-dozen others conclude that there exists an unceasing and deadly feud between them.—"*Perniciosa brassicæ cum vite odia*," says Pliny; and in their continual and implacable contests, it appears this vegetable polecat always has the upper hand owing to the peculiar endowment of an intolerably fetid odour; the consequence is, that the vine which is by nature of a very delicate constitution, and gentlemanly sensitiveness, and cannot bear a cabbage "between the wind and his nobility," uniformly flies if he can, from his burly antagonist, and by this means preserves his life, knowing that,—

He who fights and runs away  
May live to fight another day.

SIR JOHN MENNES.

<sup>1</sup> Hist. Plant., vii., 4, and Caus, Plant, ii., 7.

But if he happen to be tied by the leg, as is mostly the case, he has no alternative but to remain in hopeless durance, and be stunk to death like one doomed to the hell of the Rabbins. We can hardly be surprised at the belief in this popular error when it is supported by such an authority as Cicero, who says ;—*Quinetiam (vites) a caulibus si prope sati sint, ut a pestiferis et nocentibus, refugere dicuntur, nec eos ulla ex parte contingere.*<sup>1</sup>

We are now come to the practical application of the discovery. The utilitarian Greeks were too astute not to take advantage of every circumstance that turned up, whether in the art of life or the art of war ; so the good old teetotaller Doctor Androcydes who lived in the time of Alexander the Great, and to whom, by-the-bye, he wrote a curious laconic epistle on Temperance,<sup>2</sup> inferred by a convenient sort of logical illation, that if this pugnacious plant be so invariably triumphant over his foe in the open arena of a vineyard, it is reasonable to conclude that he would be no less successful if he were bagged with his enemy in the narrow cockpit of the human stomach ; because being contiguous to his enemy there, he would be able to grapple with him at once, and turn him out of doors whenever a maudlin Greek found it necessary to open a safety valve for the safety of his life. Cæsar says, “Men eagerly believe what they wish ;” and with the Greeks this was the consummation they so devoutly wished. As soon therefore as Androcydes had propounded his brilliant theory, they pinned their faith to it ; and it was immediately resolved without a dissenting voice, that an anti-crapulous patent should be taken out by which, without the fear of being haunted by the spirit of wine in the shape of a walking mopstick, they

<sup>1</sup> Nat. Deor. vii., 47 : see also Palladius, Mens. Aug Tit. v. For which see Plin. Nat. Hist. xiv., 5.

would be able to enjoy their "brimming bowl" from morn till dewy eve, and again from eve till morn. Whilst Androcydes who was a temperate man and a good, and although a doctor, was no

Doctor of tremendous paunch,  
Awful and deep, a black abyss of drink—  
THOMSON.

might justly exclaim with the poet, on the consummation of this mighty revolution in the moral world, "exegi monumentum ære perennius."

That I have only metaphrased this story of the credulity of the ancients, I appeal to the authors already quoted, especially Pliny.<sup>1</sup> In reading him, however, I beg you to observe that he almost invariably mistakes the text of Theophrastus, whom he copies. In the present instance and in many others he turns Παϕαρος, the Attic word for cabbage, into the equivocal *raphanus* instead of *brassica*. Quorundam natura non necat quidem, sed lædit odore aut succi mistura; ut *raphanus* et laurus vitem. Olfactrix enim intelligitur, et tangi (angi) odore mirum in modum: ideo cum juxta sit, averti et recedere, saporemque inimicum fugere. Hinc *sumpsit Androcydes medicinam contra ebrietates, raphanum (brassicam) mandi præcepiens*.<sup>2</sup>

There is a passage in Philostratus which must be noticed here from its analogy to this singular theory. He says Bacchus furnished the vine for the common use of all creatures except the owl, which he scares away from the grape; and that if a child while very young and unaccustomed to wine should eat the eggs of the owl, he would feel a disgust at wine all his life,

<sup>1</sup> Nat. Hist., xvii., 24.

<sup>2</sup> Consult Varro, lib. i. Palladius Men. Aug. Tit., v. Crescentius, vi., lib. i., *in cauli*.

and also abhor those who were drunk with it. Τὴν γὰρ ἄμπελον ὁ Διόνυσος παρέχει κοινὴν πᾶσι πλὴν τῆς γλαυκός, ἐκείνην δὲ μόνην ἄρ' ἀπωθεῖται τῶν βοτρυῶν, ἐπεὶ δὴ τοῖς ἀνθρώποις διαβάλλει τὸν οἶνον· ὥς γὰρ τῆς γλαυκός εἰ φάγοι παιδίον νήπιόν τε καὶ αἶνον ἀπεχθάνεται τῷ οἶνῳ πᾶσαν τὴν ἡλικίαν, καὶ οὗτ' ἂν πίοι καὶ φοβεῖται τοὺς μεθύοντας.<sup>1</sup>

I have made this digression simply with a view to show how nearly the men of two remotely distant periods of time have approximated in pursuing almost the same course of self-deception, by clothing two plants in attributes suited to their views, and furnishing pretexts for the gratification of kindred appetites, the indulgence of which levels them to the same depth of degradation. As to the cabbage, I grant if men endowed it with visionary qualities for such purposes, the indulgence in it was followed by no pernicious effects, but on the contrary, it afforded a healthful repast; whereas tobacco taken on any condition not sanctioned by necessity, is both prejudicial to health, and forms an ungentlemanly habit. I have no hesitation in saying further, that wherever the practice of smoking is introduced beyond the purlieus of the alehouse it becomes to every one within its sphere a nuisance even more intolerable than the stench of the cabbage is to the vine.

<sup>1</sup> Εἰκόνες Iab. 2, 17, 8.



## LETTER XI.

### HUMAN HABITS.

Νόμος, ὁ πάντων βασιλεύς  
θνατῶν τε καὶ ἀθανάτων,  
ἄγχι δικαίων τὸ βιαιότατον  
ὑπερτάτη χεὶρ.—

PINDAR <sup>1</sup>

LORD BACON has an observation in one of his Essays, which is almost a literal translation of this fragment of the great lyrist; he speaks of custom as being the principal magistrate of human life.<sup>2</sup> In assenting to the truth of the doctrine I should consider my work only half performed if I omitted to elucidate the preceding observations on tobacco by a few practical remarks on human habits in reference to its use and abuse. But before considering the particular habits of smoking, chewing, and snuff-taking—the practices to which I particularly address myself, I wish to premise a few observations on habits in general.

The definition of custom is perhaps more properly the province of the statesman or the lawyer; but of habit, if we divide it into the moral and physical, as the pious and logical Bishop Butler has done in his incomparable “Analogy of Religion,” the definition will belong exclusively to the priest and the physician. Let it answer our present views, however, to settle it somehow in this manner—Custom exerts its influence on communities, habit on individuals; *i.e.* custom is the habit of states or societies, habit the custom of persons. Custom

<sup>1</sup> *Scholiast* Ad Nem. ix. v. 35.

<sup>2</sup> Essays, No. 40.

has often the force of a law by long prescriptive usage and governs masses of individuals; habit never extends beyond the government of the individual, for it is the despot of himself only. The laws of some of the Grecian states were nothing but customs. Solon founded his laws on those of Athens. King Pepin ordained that where there should happen to be no laws custom should be complied with.<sup>1</sup> General customs frequently arise from personal habits, or from accident, as in the case of the Macrocephali one of the ancient tribes dwelling near the shores of the Euxine somewhere about Colchis. Hippocrates says they were named *Longheads*, because they differed from every other race in the length of their heads. This disproportion was at first the effect of custom—ὁ νόμος αἰτιωτατος ἐγένετο, κ. τ. λ. “This custom,” he adds, “arose from the idea of nobleness which they attached to the length of the head.”<sup>2</sup>

The Greeks considered habits and morals as one and the same for they justly included the one in the other; and Hesiod clearly means character, the aggregate of morals, where he describes the mental qualities of Pandora—

Ἐν δ' ἄρα οἱ στήθεσσι διάκτορος Ἀργειφόντης  
Ψευδεα θ' αἰμυλίους τε λόγους καὶ ἐπὶ κλοπον ἦθος  
Τεῦξε.<sup>3</sup>

Next, Hermes taught her how the heart to move,  
With all the false alluring arts of love,  
Her *manners* all deceitful, and her tongue  
With falsehoods fruitful and detraction hung.

Hippocrates will be readily understood by every one who has enjoyed the comforts of a good bed or felt the discomforts of a hard one—Κοίτη η'

<sup>1</sup> Laws of the Lombards, ii. 41, 6.

<sup>2</sup> Hippocr. *περὶ ἀέρων, ὑδατων, τόπων*. Sect. 20.

<sup>3</sup> *Oper. et. Dies*.

παρὰ τὸ ἔθος μαλθακὴ, πόνον' ἐμποιέει, καὶ σκληρὴ παρὰ το ἔθος.<sup>1</sup> Whether the bed be soft or hard, it is equally incommodious to him who is unaccustomed to it. Ovid mourns that he has no prospect of dying in his *accustomed* bed, and no doubt he had some reason, considering the difference of temperature in winter between Tomè on the Black Sea, and Rome—

<sup>2</sup> Nec mea consueto languescent corpora lecto.

Aristophanes employs *τροπος* for that acquisitious habit, or temper of mind, called humor.<sup>3</sup> Εγω δε τουτου του τροπου πως ειμ' αι.<sup>4</sup> St. Paul<sup>5</sup> admonishes thus, Μη πλανασθε φθειρουσιν ηθη χρηστα ομιλαιο κακοι,—Be not led into error. Evil intercourses corrupt useful habits. Cicero employs “*consuetudo*” indiscriminately for custom and habit. “*Consuetudine jus est quod aut leviter a natura tractum aluit, et majus fecit usus ut religionem; aut siquid eorum quæ ante diximus ab natura profectum majus factum propter consuetudinem videmus; aut quod in morem vetustas vulgi approbatione perduxit;*”<sup>6</sup> and in another place, “*Aniculæ sæpe in ediam biduum aut triduum ferunt: subduc cibum unum diem athletæ, Jovem Olympium eum ipsum cui se exercebit, implorabit, ferre non posse clamabit. — Consuetudinis magna est vis.*”<sup>7</sup> A poor old woman will endure hunger for two or

<sup>1</sup> Vict in. Morb. Acut., sect. 23.

<sup>2</sup> Trist. iii. 3. 339.

<sup>3</sup> So graphically described by Ben. Johnson:—

—When some one peculiar quality  
Doth so possess a man that he doth draw  
All his affects, his spirits, and his powers,  
In their confusions, all to run one way,  
This may be truly said to be a HUMOR.

*Every Man out of his Humor.*

<sup>4</sup> Plut. 246.

<sup>6</sup> De Invent. ii. 54.

<sup>5</sup> 1 Corinth. xv. 33.

<sup>7</sup> Tusc. ii. 17.

three days together; but, withhold food from a wrestler for only one day, and he calls his God to witness, and swears he cannot live.—So great is the power of habit. So also Quintilian, “*Superest igitur consuetudo: nam fuerit penè ridiculum, malle sermonem quo locuti sunt homines, quàm quo loquantur. Et sane quid est aliud vetus sermo, quam vetus loquendi consuetudo?*”<sup>1</sup> and, again—“*consuetudo et exercitatio*”—*habit and practice*—“*facilitatem maxime parit: quæ si paululum intermissa fuerit non velocitas illa modo tardatur, sed et νάρκημα ipsum coit atque concurrat.*”<sup>2</sup> I must remark here that I have not preferred these examples in a critical point of view, but to show partially the practice of the ancients in respect to the interchange of habit and custom.

All the occupations which formally engage the attention or employ the physical energies of men in operations repeated with uniformity and frequency are nothing but habits, each distinguished by some technical definition. The habits of civilized men must necessarily far exceed in number and complexity those of the savage. The habits of the latter are only his instincts “carried into act.” Self preservation, the supply of animal wants, the ardours of love, the bitterness of hatred, and the desire of revenge, are both the fountain and the compass of his habits; the energy of his genius or the sagacity of his mind is seldom employed on grander conceptions than the dextrous exercise of the rude arts which subserve his limited necessities, or humour his passions; so that his habits form only a minute portion of the interminable series of human engagements. On the other hand, in civilized communities the march of intellect, the progress of refinement, and the insatiety of human desire have multiplied the sources of

<sup>1</sup> Inst. Orat. i. 6.

<sup>2</sup> Id. x. 7.

gratification to a boundless extent, and the catalogue of habits has swelled *pari passu* to the dimensions of a cyclopedia.

Habit bears some analogy to a law of organic life; and like a natural law it admits of a full and satisfactory explanation. It is a means of surmounting many difficulties connected with our well being which would remain insuperable without its aid. It is therefore essential to rational beings, because as rational beings our instincts are insufficient and our reason often fallacious; so that it exerts a necessary influence on our moral conduct, our mental operations, and our muscular actions. In these relations it penetrates to the deepest recesses of the system, and takes a leading part in the moulding of human character. When it is once established in the constitution, it may with difficulty be disused; but it can never be effaced from the memory.

All our moral, intellectual, and physical habits are founded on a groundwork of particular bodily movements, or particular modes of thinking repeated frequently under the direction of the will and attention, until they are performed with such readiness and ease that they are begun and ended without the will, or even consciousness taking any cognizance of them; the more frequently and regularly such actions are repeated the sooner is the habit formed; because every repetition renders it more familiar, and impresses it as it were more deeply on the mind. Habits are also acquired by slow degrees and almost insensible efforts; and neither the organs of the body, nor the faculties of the mind can be forced into habits, or suddenly invested with them, good or bad.

Ill habits gather by unseem degrees,  
As brooks make rivers, rivers run to seas.

DRYDEN.

Yet Bishop Butler thinks that such effect is possible. "Nor do we know," he says, "how far it is possible in the nature of things that effects should be wrought in us at once equivalent to habits."<sup>1</sup> *Nemo fuit repente turpissimus*<sup>2</sup>—"no man ever suddenly became a sinner." No! nor a saint either. He must be gradually exercised in whatever constitutes a vice, a virtue, or anything else, before it can become habitual. To suppose a habit could be formed by a single effort of the mind, or a single act of the organs, is to suppose what logicians would call a moral impossibility, or something like an effect without a cause. For if the mechanism of habits, if I may so express myself, be considered, you will find such an occurrence wholly at variance with the laws of nature. When you examine the materials of which they are constituted, the laws by which they operate, and the combined agency which establishes them in the constitution, you will see that habit is based on a principle of organization and acts as determinately by a law as any other function.

As, however, it is impossible here to enter into detail on so complex and voluminous an enquiry as is involved in the full consideration of habit and its relations to the whole philosophy of the human mind, I must limit myself to the difficult task of endeavouring to convey to you a knowledge of the subject in outlined miniature.

All habits are essentially referable to the influence of the nervous principle and the circulation of the blood. And it is a very old and popular maxim that the impressions which are made on the human mind in infancy and youth are both the deepest and most lasting of all acqui-

<sup>1</sup> Analogy, &c., part 1, chap. v.

<sup>2</sup> Juvenal, Sat. ii. 83.

sitions; a maxim which our after experience proves to be correct. The reason which physiologists assign for these effects, is, that in those periods the sensibility of the nerves which impart the sensitive power to the organs of the body is in its most excitable condition, and more susceptible of impressions made on these instruments both within and without the body, than at any other stage of life.

It has been conjectured by some philosophers on apparently solid grounds, that the human mind at birth is as destitute of ideas as a blank sheet of paper: such is Aristotle's notion. But the proposition is still undetermined, and it will be as well for you to leave so subtle a question to the decision of the judges, and take it in the mean time only as a theorem. But beyond all controversy there are primitive emotions in the mind before birth, though they can be only very limited and slight, taking into consideration the undeveloped state of the organs of the intellect. Aristotle grants something of this kind, in the *τὸ πεφυκὸς*. But do not emotions however faint imply a cause? an idea traced on the mind? and is not the idea itself the result of an inward impression or suggestion? An idea, speaking generally, is the representation made on the mind, by the impression of objects with which the nervous villae come in contact; an innate independent perception originating in the mind itself is also an idea. This approximates the notion which Plato entertained of certain immutable essences existing from all eternity in the Divine mind, which were the archetypes of the universe.

The brain is the organ of sense, of motion, and of the intellectual faculties; it communicates with the rest of the body by means of the nerves, which are cords or filaments distributed in myriads through the system. The whole surface of the

body is protected from injury by a panoply of nerves like the linen hauberk of King Amasis, so delicate minute and close in texture that the point of the finest needle could not find space in the meshes without touching numbers of their tactile extremities. All these nerves terminate mediately or immediately in the brain.

This complex organ consists essentially of two portions distinguished by the name of the grey and the white substance. The grey, or hemispherical ganglion forms the circumference, though not confined to the surface alone; and the white constitutes the great proportion of the central mass, whose office it may be conjectured is to secrete or evolve a certain vital principle to be noticed below. The grey portion does not dip far into the substance but is spread over certain deep winding folds or convolutions, which fit without pressure into each others bosoms, and thus gives a vast extent of surface to the grey neurine.

This interminable congeries of folds forms a system of independent organs connected with each other in office and structure, and are now generally considered, and with great probability, to be the organs of the intellectual faculties. All the nerves pass through the white tubular or dielectric matter, and terminate in the grey neurine. Each nerve is double and consists of a sensory and motor filament, and are endowed with a singular vital property, called sensibility, which fits them for the service they have to perform. The nerves of sensation are sometimes called centripetal, because they convey all impressions from the circumference of the body to the grand centre of the nervous system—the brain; and those of motion, centrifugal, being the messengers, as it were of the mind, conveying all mental commands from the centre to the various organs and parts of the body.



All impressions made on the sensory papillæ of the nerves of sensation forming the special senses, as touch, hearing, seeing, tasting, smelling, are conveyed along these conductors to the brain, which by an inscrutable process instantaneously excites the *idea* or *image* of these impressions on the mind. Each organ receives its own special impression which is immediately manifested in the evolution of the corresponding phenomena of sensation, thought, or emotion. Let us suppose for example an object of distress makes its impression on the sight, it is first painted on the retina of the eye, the visual image is then transmitted with the speed of lightning along the optic nerve to the organ of benevolence, when the idea of pity is instantaneously perceived in the mind, and is the commencement of a train of mental operations which may excite to acts of charity. Thus we feel, perceive and act, and hence we know that we exist, and exist in relation to something else. This is consciousness ; and our consciousness proves beyond all controversy that the nerves are the inlets of our knowledge, the messengers of our will, and the medium through which we recognize our relation to a First Cause.

To be perfectly correct, however, you are not to understand the nerves to be the positive conductors of the materials of thought or the positive emissaries of the mind's behests ; they are only the channels by *means* of which all communication is carried on with the sensorium. There is a vital principle, subtle and invisible, called the nervous fluid, the nervous principle, the *vis nervosa*, the *πνευμα*, galvanism, &c., which pervades in their specialties all organisms, gives energy to, and vitalizes the animal machine ; it follows the blood in its circulation, and the juices in their meanderings into the minutest crypts of living matter, and it uses the nerves as its proper canal, like the

conducting rods of electricity, to and from the sensorium. The properties of this wondrous principle are to flow wherever it is required, to serve as messenger from the circumference to the centre, and from the centre to all parts and organs of the system; and to animate and maintain all the compages of the body, in due vigor and vital harmony, while the blood maintains and supplies this vital spirit which is secreted from it in the brain. "The life of the flesh is the blood," is a physiological axiom as old as creation.

Now these two principal elements, the nervous fluid and the blood, are the chief instruments in the formation of habit. The blood nourishes the body, maintains the innate heat and supplies all waste. The nervous fluid supports the vital actions and is the medium of intelligence between matter and mind, and furnishes the material of all intellectual operations; and as long as the various organs of the body perform their functions in harmonious relation, the distribution of these principles to all parts of the system proceeds with isomeric influx. Every part and organ is furnished with a supply suited and proportioned to its ordinary wants. But when the equilibrium of any part or organ is disturbed by increased action, nature in her abhorrence of pause allows no interval of suspense. It is a principle of all animal organisms that wherever increased activity reigns there must be increased expenditure of the vital energies, and therefore an instantaneous supply is sent to maintain the power and activity of the organ under exercise. As the action continues the waste proceeds; the equilibrium between loss and supply may be at first maintained at the expense of the parts around but ultimately the brain is called upon for additional supplies. The increased action, whatever it be, must be supported, and supported it is by a continued

evolution and continued influx. I am speaking of the single effects of a single action, and how that action is sustained while it lasts ; when it ceases, the natural equality of supply and demand is restored.

But when the same action is frequently repeated, nature, in order to provide according to her own laws for the new action set up, elaborates an increased supply, and establishes a ready means of furnishing it by enlarging the vascular and nervous system of the organ or parts in action, to admit with facility and regularity the quantity required. Every part of the organ receives increased nourishment even to the bone.

A dilatation of the vessels of the parts operating commences, and if the action be continued through a period of time, even at moderate intervals, a permanent augmentation of size is effected, and an increased influx of the elements of nutrition and of vital energy circulates thenceforth in the parts. It is in this wonderful and facile adaptation or bending to circumstances, that you will discover how nature quietly engrafts on the constitution what is commonly called a second nature, which rules like a law equally our psychical moral and physical system. The same causes produce the same results. Every thought as well as every act effects a change in the sensorium ; and mental habits are acquired with equal readiness and ease, and by the same means as those of the body. For the organs of the mind being the most vascular in the body, are liberally supplied with the pabulum of life and activity, and undergo enlargements or acquire accumulations of gray matter according to the degree in which the intellectual faculties are exercised. This is no theory. You have learnt that all the organs increase by exercise, and the fact is beautifully and graphically illustrated in the progressive development of the convolutions during the process of growth and

education; and in the collapse and decrease of the same organs by long disuse, madness, and paralysis. According to the investigations of A. Desmoulins, and Magendie, the brain begins to form its corrugations only about the end of the sixth or beginning of the seventh month of fetal life. The depth and number of these convolutions increase progressively after birth. So that in the brain of the new born infant which may be appositely termed the zero of human intellect, the corrugations are ill defined, and the sulci without depth: in that of the clown the progress of development is, as it were, arrested at the freezing point, the highest to which his necessities have permitted or required his intellects to soar; and in that of the philosopher the greater size and vascularity of the organs and the depths of the folds display not only the measure of his mental capacity, but almost the degree to which the organs have been exercised and increased by the diversified operations of his mind. And the law is the same, whether you lift a pin, wield a sledge hammer, or resolve the difficult and abstruse problems of mathematics—one result invariably ensues, an increase of the circulating fluids and a supplemental influx of nervous energy to the parts exercised, proportioned and adapted to the violence, the intensity or the continuance of the action.

As the operations of the mind increase in number and variety, so the gray substance of the brain augments in quantity. But the size of this organ being amenable to the laws of organised life which limit its growth to a due proportion with the rest of the system, the Author of Nature has provided a means of enlarging the organ of thought without disturbing the general symmetry, by giving to the convolutions the power of deepening, or acquiring additional matter according to the active energy

of the mind and the nervous system. Every line, nay, even the smallest divisible part of a line which the furrows acquire in depth, increases by so much the capacity of the intellect. Convolutions of great depth are generally manifested by an appreciable difference in the structural length of the head: and it expresses less a metaphor than a physiological axiom to say of any person endowed with a high order of talent, that he is "a long-headed fellow," for in that popular dogma a just tribute is paid to the actual possession of great intellectual capacity. So that a man thus gifted is large brained without being abnormally large headed; and if the brain be also fine as to quality he is both capacious in intellect and powerful in thought; he is, or ought to be a genius.

Pericles and Cicero were remarkable for the length of their heads: and Pericles mistaking this configuration for a blemish was ashamed of it, and always wore in public a helmet to conceal the supposed deformity. Cicero's head besides being long was also higher on one side than the other. I do not however believe the latter abnormality to be any advantage; many persons having this malapposition of the cerebral hemispheres have come under my notice, and I can only say of them that every one was insane, or became idiotic afterwards. I have had numbers of this irregular condition of the hemispheres under my care in this Institution who were not only insane but proved to be incurable.

Such is the law of habit,<sup>1</sup> whether it consist in muscular movements or mental operations. It is simply the result of a permanent relation established between the brain and the part excited

<sup>1</sup> See Reil's *Fieberlehre*, iv. 5; Feuchtersleben's *Principles of Medical Psychology*, chap. iii.; and the admirable work of Dr. G. C. Holland, the *Philosophy of Animated Nature*, *passim*.

in the actions or trains of thought constituting the habit. You will now have seen that the sensorium is an organ full of mystery, full of divinity, affording one of the most striking illustrations of the rapturous exclamation of the psalmist—"I am fearfully and wonderfully made." As we have already observed it is the instrument which connects us with all external things; the medium of all our intelligence; the mysterious agent which communicates to our mortal nature the greatest of all the attributes of the soul, our consciousness; and it discloses to us our relation to a Divine Artificer. In every act of perception, that is, every time we feel, hear, see, taste, smell, or think, there is disclosed to us in these minute and momentary gleams an evidence of the inherent presence of a something altogether different from our material fabric;—a soul, whose immortal splendour it is that thus flashes through the massy walls of its prison and irradiates with the lightning glance of thought the whole universe, from the floating atom of dust to the Deity. Nay, more, every idea whether it momentarily sweep across the disk of the mind, or tarry in the chambers of the memory, is the manifestation of a "Divinity that stirs within us." What else could illumine our clayey tabernacle and carry on the perpetual miracle of thinking? What constructive energy of matter could make us gods in knowledge and impart to us those senses which connect us with the world without; and that consciousness, which unfolds an intellectual world within?

The formation of particular habits, or actions equivalent to habits, will now be easily understood. At the commencement of all muscular actions or mental emotions which are intended to result in permanent acquirements, as the learning of any mechanical art; the playing on musical instru-

ments,<sup>1</sup> dancing, reading, writing, or any particular course of thinking, the attention and the will are first strongly engaged on the task which the organs under tuition have been required to learn. At first all the necessary actions and evolutions are difficult and sometimes painful, and the motions slow, clumsy, and awkward. They are repeated from time to time, however, with regularity and sufficient frequency to maintain the effect of the first breaking in; the vascularity of all the vessels concerned increases to meet the increased demands upon the vital and nutritive elements according to the organic law, "*ubi stimulus, ibi humorum uberius adfluctus*;" and although for a length of time the actions are imperfect and disheartening, yet by perseverance the parts begin to accommodate themselves to the novel positions, actions, and movements; the student goes on and improves; and each succeeding trial is found to grow less irksome, abstruse, and difficult. After much painful exercise facility is attained, and in proportion as readiness and ease approach perfection, the attention and the will slacken, because their aid is less necessary. At last the actions become familiar; perfection has crowned the toil; and from that time attention ceases to be exerted, and the will takes no further concern in the movements. The art, whatever it be, is accomplished, and with it is established a new principle in the human system, which causes the operations involved in the habit to proceed in future with as perfect spontaneity and independence as the functions of an involuntary organ. "I conceive it to be a part of our constitution," says Dr. Reid, "that what we have been accustomed to do, we acquire not only a facility, but a proneness to do on like occasions; so that it requires a particular will or effort to for-

<sup>1</sup> Read Arist. Eth. Nicom., lib. ii., cap. i.

bear it, but to do it requires very often no will at all."<sup>1</sup> It is the pleasure or the pain that follows after acts which we must make the test of the perfection of the habit.<sup>2</sup> All this comes under your notice in a thousand familiar forms every day. Observe what wonderful movements and difficult evolutions are performed on the piano or the violin with the fingers, while the attention and the will are actually engaged on something else. A young lady mentioned by Dr. Darwin, executed a long and very difficult piece of music with the utmost precision under the eye of her master, but seemed agitated during the execution of it; and when she had concluded, burst into tears. It turned out that her attention during the whole time, had been intensely occupied with the agonies of a favorite canary bird, which at last dropt dead in its cage. There could be no better test that the habit was perfect according to the Nicomachean rule. You will perhaps better comprehend the doctrine of habit by a familiar example. You are told by your doctor or your own instincts that you ought to take exercise for the sake of increasing your strength or maintaining your health. How does exercise operate in effecting these results? It operates on precisely the same principles I have just been explaining. You take some particular exercise, and in doing so you probably have or ought to have brought every part of the body into action. A general, and greater than usual expenditure of the vital principles to maintain that action is the consequence; and in course of time you are informed of this waste in the plainest possible language, the familar language of sensation. A bill of reckoning is sent from the Brain, Blood, and Co. to the Stomach, and it consists but in one or two words—Exercise Debtor to Vital supplies. The

<sup>1</sup> Essays on the active Powers of Man, p. 130.

<sup>2</sup> Arist. Nicom. Eth., lib. ii., cap 3.



debt being a just one, is acknowledged at once, and from that moment the importunities of your appetite to settle the account in order to restore the balance which that waste has occasioned, by ingesting a supply of nourishing and wholesome food, are incessant and clamorous until it is satisfied. Thus you keep up a constant circulation of fresh-made, well secreted, healthy juices meandering like fertilizing streams through enlarged and vigorous organs. The strong athletic arm of the blacksmith, and the muscular and well turned calves generally seen on the legs of serving-men in London, caused by the constant exercise of running up and down stairs, frequently with considerable loads, are familiar examples of the executive force of this law; the nutrient and energizing elements flow abundantly into those members to supply the continual expenditure; thus the arm of the hardy race of Tubal-Cain trained in continual exercise of the same perpetual unity of action, can wield with perfect facility for an indefinite length of time a hammer, which one unused to the weight and movements would find it difficult to handle for a minute. From these considerations you will easily understand that habit can only be formed on the immutable laws of nature through time and practice; and the proof of their naturalization is when the performance of them gives no uneasiness.

Reference has been made in a former page to the supposed blank state of the human mind at birth. I believe the hypothesis rests upon solid and satisfactory grounds. The undeveloped and almost undefined condition of its organs leads us to the conclusion that no idea has yet disturbed the pure and tranquil surface of the infantine soul. And when it is said that in infancy and youth the understanding is in its most recipient state, it only means that the creature, having everything to learn, the mind is passive and acquisitive, not active,

and receives with avidity and treasures up with care whatever is offered to it by the senses. During the period of growth its system has to put forth a degree of energy which no future time of life can command; and to support this enormous action Nature provides it with the most nourishing and suitable of all foods—its mother's milk. The brain, comparatively, is large out of proportion, the nervous and muscular systems are super-endowed, the organs are more active, and all the functions performed with greater energy than when the body has attained its full increment. Hence the reason that the susceptibility of the system is in its most excitable condition; and that, figuratively speaking, impressions made on the mind then are deeper and more lasting than at any other period of life. Because it is not only unencumbered with knowledge, but even so scantily furnished that in its onward progress it has occasion to make frequent reference to everything in contact with its senses, as well as to what it has already in store. Therefore ideas frequently called up or used are so much better remembered. The primary law of infant humanity is to learn to live; and it seems to be an instinct growing out of that law, that it shall learn first what is necessary; next, what is useful; and lastly, what is supplemental. This is another reason why early impression should be best remembered. We talk indeed of the innate badness of human nature, and we descant on the seeds of mischief being early sown in the human soul. But I deny that there is any proof of necessary innate corruption of our moral nature. We forget that many evils elude the inexperienced eye of the learner in the numberless fascinations which charm and arrest his young and unpracticed attention; and it is no wonder if, in the infinite and accumulating variety of novelties which every day's acquaintance with life presents

to his appetite for knowledge, he should sometimes ingest a portion of poison along with the wholesome nutriment of the mind.<sup>1</sup>

The question has been sometimes agitated whether the human mind grows and decays with the creature. This has been the popular belief ever since the time of Lucretius, who says :—

Præterea, gigni pariter cum corpore, et unâ  
Crescere sentimus ; pariterque senescere mentem.<sup>2</sup>

On this subject I assume the privilege of thinking for myself. The mind has always appeared to me immortal, immutable, and independent of the changes of the body. I think that from the first moment the animal receives its physical existence, when the heart is no larger than the eye of a mite, the mind exists in all its maturity, infinitude and divinity, as full and perfect as when it can comprehend and explain the laws of an universe. But it is ordained by the Author of Nature to operate and to manifest its endless phenomena through a *material* organ ; and as this organ can only act according to progress and development in the growth and expansion of the being, it *seems* to grow with the body, and *seems* to diminish with its decay. To suppose this was actually the case would be an unjust conclusion, and it is proved to be unjust by the exceptions which have frequently occurred in respect to the apparent growth and decay of the mind at both extremities of life.

<sup>1</sup> Plato held that the will was naturally inclined towards virtue, and that vice was contrary to nature. Aristotle's opinion amounted to this, that virtue is a natural law and that all men are born under that law. But chief of all, Bishop Butler maintains "that this our nature, *i. e.* constitution, is adapted to virtue, as from the idea of a watch it appears, that its nature, *i. e.* constitution or system, is adapted to measure time.—Thus nothing can possibly be more contrary to nature than vice.—Poverty and disgrace, tortures and death are not so contrary to it"—*Preface to his first three Sermons.*

<sup>2</sup> De Rerum Natura. lib. iii., 446.

Precocious intellects in children, and minds that have survived the wreck of the body and shone in full meridian power at the end of the longest term of existence, are not uncommon occurrences. The former of these extreme examples rests on the anticipation of a natural law. In the precocious infant such as the wonderful Baratier, whose brain was prematurely expanded and inordinately exercised, and the young, feeble, and inadequate body defrauded of its due share of the vital energies which were absorbed in carrying on the gigantic labours of this prematurely developed organ, sank into an early grave from pure inanition. The philosopher who dies at the age of ninety with his body worn out and his vital powers exhausted, while his intellects remain unimpaired, only proves the popular maxim to be a vulgar error. Ten thousand well authenticated examples declare that the human mind may appear to become feeble, to decay, or altogether to cease at any period of life in the strongest and healthiest body; and ten thousand examples also prove that the principle of intelligence has shone in all its brilliance and vigor at the age of 100 years.

It is the faculties of the mind which expand and decay; and its functions which accumulate; but the mind itself is a *semper idem*. We say the mind evolves and contracts, is healthy or unsound: surely in employing such language we use a metaphor and speak in metonymy. For in assenting to the growth and decay, the expansion and contraction of the soul we ascribe to an eternal, impassive, and immutable emanation, the essential properties of matter; and without meaning it, we subscribe ourselves materialists.

In the progressive development of the brain from birth to middle age, the difference between the simple stationary instinct of brutes and the grandeur of the human mind is most conspicuous.

The one is ever prone on the earth, "*ventri obedi-entia*," the other mounts by degrees from the earth and soars on ceaseless wing in all the sublimity of unbounded intellectual capacity to the utmost verge of "all the worlds that roll around the sun," as if it loved to hover near the Eternal Fountain of Light, into which it is its highest hope to be finally absorbed.

Thus man is the creature of circumstance and the slave of habit almost from the moment of his birth. And as in his "animal capacity he is qualified to subsist in every climate, he reigns with the lion and the tiger under the equatorial heats of the sun, or he associates with the bear and the reindeer beyond the polar circle. His versatile disposition fits him to assume the habit of either condition, or his talent for arts enables him to supply its defects."<sup>1</sup>

The body, moulded by the clime, endures  
The equator's heat, or hyperborean frost :  
Except by habits foreign to its turn  
Unwise you counteract its forming power.  
Rude at the first, the winter shocks you less  
By long acquaintance.—ARMSTRONG.

In the great journey of life there is no moment of pause.<sup>2</sup> Man lives upon a succession of incentives to action; and his mind expands and exults in the tumult of continued pursuit. It may be said of him as of the ancient Scythians, *vita semper in fuga est*. From the hour of his birth he is goaded by new wants and agitated by fresh emotions which spring up without end in his soul, and keep him in a state of perpetual activity; and every energy of his mind is absorbed in a tide of exertion to realize the dreams of his fancy, or gratify the desires of his heart. Happiness is "his being's end and aim;" but his aim is never fully accomplished; for in the ardour of pursuit, mistaking

<sup>1</sup> Ferguson, Civil Society, part iii., sect. i.

<sup>2</sup> Alison's Sermons, vol. ii., p. 217.

the goddess, he clasps enjoyment to his bosom and calls it his divinity. "Happiness is the prize and the end of perfect virtue."<sup>1</sup>

Our aim is happiness ; 'tis yours ; 'tis mine,  
He said, 'tis the pursuit of all that live ;  
Yet few attain it, if 'twas e'er attained.  
But they the widest wander from the mark,  
Who through the flowery path of sauntering joy  
Seek this coy goddess, that from stage to stage  
Invites us still, but shifts as we pursue.

ARMSTRONG.

The unsated passions of his soul afford him no repose. His imagination glows with new forms of bliss and fires him to fresh efforts. This phantom of human life still beckons him on, gilding the prospects with brighter enchantments ; and distant felicities start up in his imagination like "spirits from the vasty deep"—

Thick as autumnal leaves that strew the brooks  
In Valombrosa.....

MILTON.

But all is vanity : and nothing less than true happiness, if such is to be found, has the power to chain this philandering, laughing, crying, hopping, despairing, animal to her chariot wheel. For the sweets of mere enjoyment soon pall on the sense ; use is succeeded by satiety, and the human paradox roves from one course of thought or of action to another, in a cycle of fugacious pleasures and disgusts, till the "scythe and spade" stop him in the perpetuation of his follies.<sup>2</sup>

But you must have observed that this systematic inconstancy of human character is, after all, innate

<sup>1</sup> Arist. Eth.

<sup>2</sup> Praeterea, versamur ibidem, atque insumus usque :  
Nec nova vivendi procuditur ulla voluptas.  
Sed dum abest, quod avemus, id exsuperare videtur  
Cætera : post aliud, cum contigit illud, avemus ;  
Et sitis aequa tenet vitæ semper hiantis :  
Posteraque in dubio'st, fortunam quam vehat ætas ;  
Quidve ferat nobis casus ; quive exitus instet.

LUCRETIVS, III. 1093.

and instinctive, and springs from that singular law of organization which has just been discussed. Repetition, while it forms and establishes the habit, diminishes the sensibility of the organs concerned. The history of this compound of instinct and reason, folly and wisdom, abounds with examples of this law. An Athenian expressed his wonder to Anacharsis, the Scythian philosopher, how he could go naked in the frost and snow.—“How,” said Anacharsis, “can you endure your face exposed to the sharp frost of winter?” “My face is *accustomed* to it,” replied the Athenian. “Think me all face then,” rejoined the Scythian.

The habit of suffering renders the body almost insensible of pain; and long acquaintance with sorrow divests it of its poignancy. Nay, the fountains of our sweetest pleasures become “stale, flat, and unprofitable,” by continual drinking at the same source. Patience is the offspring of hope frequently blighted, and the man inured to disappointment bears the defeat of his hopes with calm indifference, while he to whom blighted expectation is less familiar moans over his disappointment with the bitterness of despair. “The mind,” says Simplicius, “is most struck and disturbed by what comes unexpectedly. For if it had been meditated on and rendered *habitual* to the thought, it would not have either so disturbed or grieved it. A clear proof of this is, that those who suffer any grievous misfortune are after a time soothed through *habit*, as if nothing of the sort had happened.”<sup>1</sup> Thus while habit wears off the keenness of enjoyment, and bereaves us of some of our most delightful sensations, it greatly increases the powers of the understanding, by giving an augmented capacity for intellectual enjoyments.

The philanthropist in theory, from the influence

<sup>1</sup> In Epictet. 33.

of habit on his mind, induced by constantly exercising it in the distant contemplation of misery and distress, acquires an acuteness and tenderness of feeling incredible to others, whilst his reasoning faculty lies almost dormant and useless. But when he has acquired the active habit of dispensing the blessings of charity, and become exercised in lessening the miseries he had formerly commiserated in theory by mingling personally in the scenes which his imagination had painted, his sensations lose their morbid acuteness and excitability, and his intellectual powers awaken, and guide him with rational and temperate zeal in his works of beneficence and mercy. By a similar discipline, the stoic could both endure pain and misfortunes in himself, and contemplate the most harassing scenes of suffering and distress in others, with the cold indifference of a statue. Such was the voluntary submission of the youth of Lacedemon to the most frightful flagellations, which they bore from habit, says Simplicius, almost to the point of death—*αχρι θανατου σκεδον*.<sup>1</sup> Such were the Athenians in their spectacles; but worst of all, the Romans. “Gladiatores,” says Cicero,<sup>2</sup> “aut perdit homines, aut barbari, quas plagas perferunt? Quo modo illi, qui bene instituti sunt, accipere plagam malunt, quam turpiter vitare? quam sæpe apparet nihil eos malle, quam vel domino satisfacere, vel populo? mittunt etiam vulneribus defecti ad dominos, qui quærant quid velint; si satis his factum sit, se velle decumbere. Quis mediocris gladiator ingemit? quis vultum mutavit unquam? quis non modo stetit; verum etiam decubuit turpiter? Quis cum decubisset, ferrum recipere jussus, collum contraxit? Tantum exercitatio, meditatio, *consuetudo* valet.” How coolly the pagan philosopher contemplates and records these scenes of systematic

<sup>1</sup> In Epictet. 10.

<sup>2</sup> Tuscul. ii. 16.



human butchery ! But the frigid stoicism of Cicero, while he alludes to these inhuman spectacles, gives but a faint idea of the cold, selfish cruelty which habit had rendered natural to the Romans. Both sexes seem to have been divested of all human feeling, and endued instead with the insatiable ferocity of hyenas. We shudder whilst we read that modest young virgins, who would perhaps shed tears of real sorrow at the death of a pet grasshopper, could not only sit and enjoy the sight of actual murder as their greatest delight, but even sanction the commission of it for their pastime and amusement.<sup>1</sup> But we find an eloquent pleader in the cause of humanity in Lactantius, who censures them with as much force and feeling as his great prototype seems to plead in favour of these constitutional murders. "Quid tam horribile, tam tetrum," exclaims this eloquent Christian writer, "quam hominis trucidatio? Ideo severissimis legibus vita nostra munitur, ideo bella execrabilia sunt. Invenit tamen *consuetudo*, quatenus homicidium sine bello ac sine legibus faciat, et hoc sibi voluptas (quod scelus!) vindicavit. Quod si interesse homicidio, sceleris conscientia est, et eidem facinori spectator obstrictus est, cui et admissor; ergo et in his gladiatorum cædibus non minus cruore profunditur, qui spectat, quam ille qui facit; nec potest esse immunis a sanguine, qui voluit effundi; aut videri non interfecisse, qui interfectori et favit et præmium postulavit."<sup>2</sup>

This faculty of habituation gives man a wonderful pre-eminence over all other animals. It renders him capable of accommodating himself to the diversities of every climate, it familiarizes him with

<sup>1</sup> ————— consurgit ad ictus,  
Et quoties victor ferrum jugulo inserit, illa  
Delicias ait esse suas pectusque jacentis  
Virgo modesta jubet, converso pollice, rumpi.

PRUDENTIUS *contra Symmachum*.

<sup>2</sup> Epitom. cap. 63. See Inst. Div., lib. v., cap. 29.

every mode of life, and it enables him to accommodate himself without injury to the influence of new and untried physical and moral agencies, and to support their effects upon his system without uneasiness or danger. The being, therefore, who is freest from the influence of habit may be esteemed as the most unfortunate: he is deprived of the firmest support to his health, and destitute of the strongest bulwark of his virtue. He must be under the control of some cause which counteracts, or modifies its power. He is in all respects the weak and tearful animal so beautifully depicted by the great philosophic poet, as cast helpless on the world—

—— ut sævis projectus ab undis  
 Navita, nudus humi jacet, infans, indigus omni  
 Vitali auxilio, cum primum in luminis oras  
 Nixibus ex alvo matris natura profudit;  
 Vagituque locum lugubri complet, ut æquum'st,  
 Cui tantum in vita restet transire malorum.

LUCRETIVS.

If human nature, says the father of pathology, were destitute of the faculty of habit, it would be the portion of few to enjoy health. It is manifest we are inured by habit to bear many things with impunity which are injurious to those who are less accustomed; but as we are greatly assisted by habit in the exercise of all the functions, so this itself disposes every one of the medicative powers, as well of the mind as of the body, to a faculty of acting by which they can approve themselves to things noxious, correct the mischiefs induced by them, and more readily restore the parts affected to their former integrity. Thus even diseases are rendered by habit more supportable and docile, and poisons themselves become mild.<sup>1</sup>

St. Chrysostom appears to have been well acquainted with the inveterate force of habit when

<sup>1</sup> Gaubius, *Inst. Path.* 644.

he said, that the hardest lesson to acquire is *to unlearn*. The observation embraces more of the philosophy of habit than you will perceive at first ; but you will comprehend its meaning better by connecting it with a fine passage of Quintilian to the same effect, where he treats of the early education of children, which is like a comment upon it.—“ Et naturâ tenacissimi sumus eorum, quæ rudibus annis percipimus ; ut sapor, quo nova imbuas, durat ; nec lanarum colores, quibus simplex ille candor mutatus est, elui possunt. Et hæc ipsa magis pertinaciter hærent, quæ deteriora sunt. Nam bona facile mutantur in pejus : nunc quando in bonum verteris vitia ? *Non assuescat ergo, ne dum infans quidem est, sermoni, qui dediscendus sit.*”<sup>1</sup> And this recalls to mind an aphorism of Marcus Aurelius, the Roman Emperor, that the human disposition will correspond to that on which one thinks most frequently ; for the soul is tintured, as it were, with the colour and complexion of its own thoughts.<sup>2</sup> It is manifest that although the force of habit is universally admitted, few consider the prodigious influence it exerts on the conduct of after life, the intimate relation it has established with the whole nature of him who is its especial subject, and its effects on the existence and character of society.

Habits exert an incredible influence upon all the transactions of life. From the administration of governments down to the economics of the cobbler’s stall, all are more or less under the restraints of habit ; national character itself is founded on the habits of the people ; they impart that peculiar moral tone and characteristic diversity to countries, which are more distinctive of nationalities than the shades of the complexion. The temper of the general mind, the peace and war, the strife and concord, the hatred and amity of nations ; nay,

<sup>1</sup> Inst. Orat. i. 1.

<sup>2</sup> Medit. v. sect. 16.

the happiness and misery even of individuals in the promiscuous intercourse of civil society, arise from the quality of their prevailing moral habits. There is no fact better established than this, that—

Our thoughts, our morals, our most fixed belief,  
Are consequences of our place of birth.

HILL'S *Zara*.

The habitual intercourse of persons, the communion of sentiments, unanimity of opinion, and the silent underworking force of imitation conspire to engender a sameness of ideas, a common affection, and a similitude of character among members of the same group; and these extending from groups to communities cemented by the ties of common privileges, unity of interests, and a common attachment to place of birth, probably form the groundwork of all patriotism.

Imitation is essentially an active energy of the constitution of man, and one of the elements of habit. In youth especially we insensibly copy something of every human action or manner presented to our observation. It is in constant operation in every stage of life, and is so potent that persons living long together will insensibly acquire a mutual resemblance in some points. This singular fact is best exemplified in the case of man and wife, where each unconsciously imitates the traits and expression of the other's countenance so effectually, that at last a sort of epicene likeness is established.

So that it may be said all society is a school of design; and every individual is a model for good or for bad to every other individual. Each takes his copy too with all the secrecy of profound unconsciousness, which enables the imitative faculty in man to operate on the mind with an energy so much the more sure and effective; and engrain the lights and shades of the pattern in the moral

nature of the copyist with indelible fixedness of coloring.

There is not any property of our constitution so dangerous in effect as this proclivity, unless it be corrected by a wakeful and discriminating moral sense ; for it is only the elevating and expanding influences of a refined perception of the beauties and excellencies in human nature, and the abhorrence of its vices, that can protect the empire of the mind from the injurious inroads of debasing propensities. Wherefore it is suggestive of some eminently useful points for consideration to parents and guardians of youth, in respect to the choice of early associates, and the selection of schools.—Schools where the heart is disciplined as well as the head.

Numerous defects, as well as moral excrescences derogatory to the dignity of cultivated intellect,—numerous cramping prejudices, which counteract the elastic powers of the understanding, may be traced clearly and directly to mimetic agency in youth at school. “If you associate with a cripple,” says Plutarch in his *Ethics*, “you will soon learn to limp yourself.” Indeed the mischievous aptitude of this faculty to single out the blemishes of its models for impropriation, becomes an actual infection in the atmosphere of schools. And the misfortune is that the resulting distempers are brought away in the form of chronic habits, which are likely to remain through life, communicating a repulsive and depreciating tarnish to the most brilliant natural endowments.

All habits arise from imitation, association, example, or instruction ; it is affirmed indeed that nine-tenths of all the men you meet are what they are, good or bad, useful or worthless, by the quality of their educational habits.<sup>1</sup> They are mostly

<sup>1</sup> See Locke’s “Some Thoughts concerning Education,” p. 1.

acquired in youth, which is the reason that in mature age they are so difficult to eradicate ; for they adhere with all the tenacity of the Old Man of the Sea, and they exercise a sway which frequently mocks all human resolution.

Custom, 'tis true, a venerable tyrant,  
O'er servile man extends her blind dominion.

THOMSON.

The influence of habit in the closet and the camp determines the destiny of nations : it may be justly affirmed that battles are lost and won neither by brute force, innate courage, nor cowardice, but by the perfection or imperfection of the strategic habits drilled into the soldier,—habits of such importance, that Valerius Maximus designates them “*præcipuum decus et stabilimentum Romani imperii* ;”<sup>1</sup> and this is the reason why a veteran has always been preferred to a recruit.—*Scientiæ enim rei bellicæ, dimicandi nutrit audaciam. Nemo facere metuit, quod se bene didicisse confidit. Etenim in certamine bellorum exercitata paucitas ad victoriam promptior est, quam rudis et indocta multitudo.*”<sup>2</sup> And Cicero, with something of martial enthusiasm, asks, “*Quid exercitatio legionum ? quid ille cursus, concursus, clamor, quanti laboris est ? Ex hoc ille animus in præliis paratus ad vulnera. Adduc pari animo inexercitatum militem ; mulier videbitur. Cur ? Tantum interest inter novem et veterem exercitum, quantum experti sumus. Ætas tironum plerumque melior : sed ferre laborem, contemnere vulnus consuetudo docet.*”<sup>3</sup> Nothing can be more true : and therefore, in Eastern phrase, habit is the parent of victory.

For to one who is accustomed to the incidents of war, the dangers and difficulties he encounters only increase his martial ardour, temper his courage

<sup>1</sup> Lib. 2, c. 7.

<sup>2</sup> Vegetius de Re Militari, I. i.

<sup>3</sup> Cic. Tusc. Disp. ii. 15.

with presence of mind, give him confidence in himself, and enable him to calculate probabilities with coolness in the confusion and carnage of the battle field. For proof of this why should I refer to the examples furnished by Herodotus, Thucydides, Polybius, Cæsar, Tacitus, Livy, Xenophon's Retreat, the Battle of Marathon, Thermophylæ, the elder Cyrus, the triumphs of Scipio, and the fall of Carthage? Or why should I remind you of the rigid habits of temperance, frugality, and military discipline which characterized the first ages of Rome?—which gave existence, sinews, and universality to the Roman Empire; or of the abandonment of these virtues for its contemptible decline and fall? Picture to yourself, from your memory of things, the domestic condition, or in other words, the domestic habits of a general of the Roman Republic. Looking back through the mist of time you can imagine the shade of an elderly man embrowned by toil and dust, sitting on a wooden block at a small table in the chimney corner of his little cabin, and dining like a simple Pythagorean on the vegetables his own hand had cultivated in his little garden.—Need I tell you this is the spirit of Roman greatness—it is Cincinnatus “from the plough.” Here you see in the simple *habits* of the man, the stern *customs* of the country, the materials of Roman virtue, and the source of conquest.

Nationality itself is a habit. Nations as well as individuals cannot long continue in one tenor of enjoyment or suffering, of plenty or want, of peace or war, without having effects arising out of, and corresponding with these conditions, impressed on the general mind; whence their intellectual faculties contract particular habitudes, inclined to this or that character. The Bœotians, owing to the moist and foggy nature of their climate, were considered the archetypes of all numskulls. Horace

can find no better emblem of a blockhead than a Bœotian—

Bœotum in crasso jurares aëre natum. <sup>1</sup>

“ You would swear he had been born in the foggy atmosphere of Bœotia.” And Cicero makes a contrast of them and the sprightly Athenians—  
 “ Athenis tenue cœlum, ex quo acutiores etiam putantur Attici: crassum Thebis, itaque *pingues* Thebani et valentes.”<sup>2</sup> Now before the time of Epaminondas, these people had almost always lived in subjection to the states around them ; but during his lifetime they acquired new habits ; he inspired them with true notions of real greatness and solid glory, and through the example, wisdom, and courage of that great man, the whole state changed the character of its habits, and rose to the supreme power of Greece. Witness their courage and his glorious fall at the battle of Mantinea ; after which, when the soul as it were of the state, the genius of their habits, had departed, they relapsed into their former insignificance and pusillanimity.<sup>3</sup> In the same manner, but by different means, Pericles invested the Athenians with new manners and habits, and the state with an altered character ; he caused the Athenians to degenerate from the virtues of their ancestors, and made them idle, effeminate, babblers, avaricious, mercenary, savage, and unjust.<sup>4</sup>

In no circumstance does habit exert such manifest dominion as in the arts of life ; and they may be said to owe their perfection to it.

Per varios casus Artem experientia fecit  
 Exemplo monstrante viam.

MANILIUS.

<sup>1</sup> Epist. lib. ii. Ep. i. Juvenal, x. 50. Nepos. in Alcib. Strab. ix. 401.

<sup>2</sup> De Fato, 4.

<sup>3</sup> Corn. Nepos, *in vita ejus*.

<sup>4</sup> Plato in Gorgia. See particularly, pp. 340, et seq. t. iii. (Ed. Bekker.)



For, as formerly mentioned, the frequent repetition of the same act gives ease, readiness, activity and perfection to all the operations that are under the direction of the will; as in the arts of writing and composition, on which Quintilian has finely expressed himself, "*Celeritatem dabit consuetudo. Paulatim res facilius se ostendent, verba respondebunt, compositio sequetur, cuncta denique, ut in familia bene institutâ, in officio erunt.*"<sup>1</sup> Cicero has given expression to similar sentiments. Bishop Butler also may be considered as taking the same view of the subject in the following passage of his logical doctrine of habit. "By accustoming ourselves," he says, "to any course of action we get an aptness to go on, a facility, readiness, and even pleasure in it. The inclinations which rendered us averse to it grow weaker; the difficulties in it, not only the imaginary, but the real ones, lessen the reasons for it offer themselves of course to our thoughts upon all occasions; and the least glimpse of them is sufficient to make us go on in a course of action to which we have been accustomed."<sup>2</sup>

I have already called your attention to this law of the human system, that when the sensibility of an organ is repeatedly or violently excited, the effects communicated to the mind become progressively weaker, and at last so imperceptible that the senses seem to take no cognizance of the excitant. We often act from habit like an instinct, without knowing that our senses have been impressed, or that we have acted in consequence. This fact did not escape the people of antiquity.—

Fieri istuc solet,  
Quod in manu teneas atque oculis  
Videas, id desideres.

PLAUTUS.

I myself have seen an old lady search with exemplary perseverance for her spectacles whilst they

<sup>1</sup> Inst. Orat. x. 3. Cic. de Invent. i. 25.

<sup>2</sup> Analogy of Religion, part I. chap. v.

were striding across her nose ; and I have known a venerable old gentleman seek anxiously for his pipe whilst it was sticking between his teeth. The unconquerable force of habit is eminently displayed in the case of a lady recorded by Dr. Percival. I quote from memory. She had an apoplectic fit, which continued twelve hours. Various stimulating applications were used to excite her ; and among the rest a feather dipped in hartshorn, was frequently applied to her nostrils. She had been all her life an inveterate snufftaker ; and now the irritation produced by the hartshorn caused her to press the forefinger and thumb of the right hand together, raise them to her nose, and inhale through her nostrils as in the act of taking snuff. When the sniffing effort ceased the arm dropped, and the head fell back in the previous inanimate state. Every time the hartshorn was applied to the nose the same phenomena were manifested, until the stimulant lost the power of irritating. The lady recovered, but had no remembrance of the circumstance, showing that habits “ once established operate of themselves easily and naturally without the assistance of the memory.”<sup>1</sup> “ They who use snuff,” says Edmund Burke, “ take it almost without being sensible that they take it ; and the acute sense of smell is deadened so as to feel hardly anything from so sharp a stimulus ; yet deprive the snuff-taker of his box, and he is the most uneasy mortal in the world.”<sup>2</sup> By the same rule the force of custom becomes so imperious and invidious that even the charms of beauty are compelled to resign their empire, and to submit unconditionally to the will of this inexorable leveller.

Nil adeo magnum, nec tam mirabile quidquam  
Principio, quod non minuant mirarier omnes  
Paulatim.

LUCRETIVS.

<sup>1</sup> Locke, loc. cit. p. 46.

<sup>2</sup> On the Sublime and Beautiful.

“So that if habit brightens our wits,” observes an elegant writer, “by blunting sensibility; on the other hand it drains the source of our sweetest enjoyments. Pleasure and pain, those two extremes of sensation, in a manner approximate to each other, and become indifferent to him who is accustomed to them. Hence arises inconstancy, or rather that insatiate desire of varying the objects of our inclinations, that imperious want of new emotions; hence we possess with indifference what we pursued with the utmost ardour and perseverance; and cease to be moved by those charms which once held us captive.<sup>1</sup>

But if indeed habit dissolve the charms and fascinations of beauty, it also bestows more genuine sources of adoration where nature has been less friendly; the admiration bestowed on the homelier features, where the heart is sound and the head furnished with common sense, are sure to be lasting, because less emotional, and resting on a substantial and permanent basis; that which is evanescent adoration in the one, remains calm and settled affection in the other. Who has not marked the ceaseless and ingenious round of ever-varying expedients to which Cleopatra was reduced in order to retain the conquests her beauty had made of the hearts of Cæsar and Anthony? after the “*habit* of satiation,” as Simplicius would express himself, had subverted its power, and produced the imperious necessity of appearing constantly with new features of attraction, and new devices of pleasure.

The great philosophic poet was no stranger to the compensating power of habit—

Nec divinitus interdum, venerisque sagittis  
Deteriore fit ut formâ muliercula ametur.  
Nam facit ipsa suis interdum fœmina factis,  
*Moriq̃erisque modis, et mundo corpori' cultu,*

<sup>1</sup> Richerand. Elem. Phys.

*Ut facile insuēscat secum vir degere vitam.  
 Quod superest, consuetudo concinnat amorem.  
 Nam leviter quamvis, quod crebro tunditur ictu,  
 Vincitur in longo spatio tamen, atque labascit ;  
 Nonne vides, etiam guttas in saxa cadenteis  
 Humoribus longo in spatio pertundere saxa ?*

LUCRETIVS.

The Mantuan bard sweetly sings that Love holds the universe in bondage ; and Pindar, that habit controls the gods themselves : therefore, this busy meddler in affairs of the heart is himself syllogistically a slave to habit. Achilles Tatius observes—If wild animals are tamed by habit, how much more readily will woman's heart be softened by that power.<sup>1</sup>

What is it which binds us to parents, family, friends, society, and country ? What principle directs the child which an inhuman custom has estranged from its mother, to show all the fondness and attachment to its nurse which should have chained it to the parent ? Is it a law of nature, or the force of habit ? The nurse is endeared to its mind and associated in its memory with everything that could fascinate and delight its nascent affections, from the earliest moments of association between the helpless thing, the bosom that affords it nourishment, and the heart that gives it mercenary love. It can neither judge of the nature nor the degrees of kindred ; and, in return for this second-hand affection, it gives its all—it gives its love. If it be habit—for it cannot be *natural* affection—it leads us a step further, to inquire on what laws of the human mind are founded the reciprocal loves of parent and child ? Are they not based on original instinct on the part of the infant at least, and confirmed by long habits of tenderness and intimacy ? In the whole range of animal creation there is no proof to the contrary. If man were left to the direction of his instincts alone, supposing

<sup>1</sup> Ερωτικων, lib. 1. c. 9.

them as powerful and unerring as those of the brute—with his intellects unexercised, untutored, and unenlightened, would his love for his offspring extend *beyond that degree and that period* when the child is in a state capable of providing for itself?

These questions are innocently intended ; God forbid they should be supposed capable of tending to slacken those inviolable obligations which bind the parent and the child in their sacred mutual duties ; it is to be hoped rather, should they ever be read, that they will cause mothers to pause before they selfishly transfer those tender offices to a stranger, which they are bound by all the laws of humanity and nature to perform themselves.—They are advanced here, however, simply because they form a curious psychological inquiry.

## LETTER XIII.

Οὐδὲ γὰρ τῶν τοιούτων ὀρέω ἐμπείρους τοὺς ἰητροὺς, ὥς  
 χρὴ διαγιγνώσκειν, \* \* \* ὁκόσα τε ἡμέων ἢ φύσις  
 καὶ ἡ ἕξις ἐκάστοισι ἐκτεκνοῖ πάθεται καὶ εἶδεα παντοῖα· καὶ  
 τοι σωτηρίην ἢ θάνατον φέρει, γινωσκόμενα ἢ ἀγνοούμενα  
 τὰ τοιαῦτα.

HIPPOCRATES.

THE consideration of habit is an endless theme. It may be likened to the reflections of Simonides on the question—What is God?—proposed to him by Hiero the tyrant of Syracuse. You may reasonably suppose how each day's investigation led the heathen inquirer deeper and deeper into a labyrinth of bewildering thoughts, until his mind finding no resting place became overwhelmed with despair. And yet the GREAT ULTIMATE FACT he was seeking lay written before him, alike in the sublime machinery of the universe and in the simple physiology of a blade of grass.

The further we inquire into the influences of habit the more anfractuons our course becomes, and the more widely the subject expands. We can follow it insinuating itself into every winding of human organization, elaborating amazing changes and modifications in the form; and we can discover it enthroned in the mental constitution, exercising an imperious sway over our moral and intellectual feelings, and even determining the quality and complexion of our character.

I am now to speak of it in its plastic capacity as it operates on the physical part of our system; and here its influence is inconstant and variable; for while its blind operations sometimes result in good, they frequently effect alterations so adverse to the original standard of the being as to require

the reparative aid of an antagonistic principle of nature, personified as the *vis conservatrix*, to repair its errors, or at least to bring them to harmonize with the vital integrity of the organisms. This pantheistic spirit is revealed through all the works of God. Every thing in nature discloses to the soul the perpetual operation of a sustaining and repairing Deus in nobis, which pervades all creation, maintains all order, rectifies all disturbance, and supports in perfection and harmony the various actions of organic life—<sup>1</sup>

Warms in the sun, refreshes in the breeze,  
Glow in the stars, and blossoms in the trees.  
Lives through all life, extends through all extent;  
Spreads undivided, operates unspent;  
Breathes in our soul, informs our mortal part,  
As full, as perfect, in a hair as heart;  
As full, as perfect, in vile man that mourns  
As the rapt seraph that adores and burns.

POPE.

With this conservative spirit, habit maintains a perpetual struggle, the latter aiming to derange or modify the type of the being, and the former to restore it when injured or disturbed. With respect to health accidents or injuries, they commonly lay aside their feuds and co-operate to produce a salutary result.

You are aware that many causes conduce both to deteriorate and to improve the shape of animals. In respect to rational beings, you know also that as society advances in knowledge and refinement the numberless useful habits which result from its moral condition, contribute to the amelioration of the health and the improvement of the form. Better food, more suitable clothing, a more perfect sanitary police of towns, cleanliness, mental,

<sup>1</sup> Comp. Virgil in Georg. Lib. iv. 221—

——— Deum namque ire per omnes  
Terrasque, tractusque maris, cœlumque profundum.

also the Timæus of Plato, cap. x. to xii.

cultivation, &c., &c., will, in the lapse of generations, undoubtedly ingenerate a disposition in the parent to produce a more perfect, a healthier, and a finer offspring, and *vice versa*. Every degree of latitude from the temperate zones towards either the Equator or the Poles proves this general thesis; and it is more than likely that the remarkable variety in the human species was originally owing to the modifying influence of climate, season, food, education, mode of life, manners, and especially to national institutions, where they existed. These causes are acknowledged to exert an influence over the resilient tendency which the form of organized being evinces when disturbed to return to its original standard; and, on the same principle, the designs of man have actually been successful in creating new and more useful varieties in those animals destined for his use. It is to this conforming and reparative principle in organized life that our domestic animals owe all their beauty, perfection, usefulness, and diversity. Although breeders have been aware of the principle ever since the time of the patriarch Jacob, yet these observations have a more immediate reference to the later experiments of Sir John Sebright, and Colonel Humphries on sheep. The former gentleman was, I believe, the first who observed that if a flock of sheep in which there was any defect is permitted to breed *in and in*, the defect will gradually increase among them: and following up this hint Colonel Humphries selected a marked variety for breeding, and succeeded in raising a flock with *deformed* bones. This was the first of that new race of sheep known by the name of the Ancona breed. The name describes the shape better than any representation, being derived from *αγκων*, the elbow; or the arm in a bent position; the peculiarity consisting in the configuration of



the animal's fore legs, which are elbow-shaped, short, and weak-jointed.

*On this by-law of organic life it is that the same habit continued in operation, will, in the course of time, ingenerate a tendency in the parent to produce a progeny differing in some degree from itself.* And there is no doubt that habit, under certain conditions, will at last induce such modifications in the structure of some parts of the body as will harmonize with the original necessity, or emotion that led to the formation of the habit. This is faintly discerned in the difference between savage and civilized man; with few exceptions the former is many degrees below the latter in the beauty of his form, the capacity of his mind, and the fertility of his genius. Deficiency of nourishment, want of mental exercise, impure and filthy habits, insufficient clothing, rigors of climate, uncultivated and undrained soils, and above all his physical necessities, which compel him to peculiar modes of life, conduce to retain the savage but one degree above the brute, and frequently produce structural peculiarities in his form; while the other is exalted through the advantage of high civilization and improvement of the mind to a form of divine intelligence in the grandeur of his conceptions and complexity of his thoughts.

Call now to mind what high capacious powers  
Lie folded up in man; how far beyond  
The praise of mortals, may the eternal growth  
Of nature to perfection half divine  
Expand the blooming soul!

AKENSIDE.

But the effects of habit are most conspicuous and energetic in cases where it has been actually adopted, as it were, by nature from necessity, and transmitted from parent to offspring; it is strikingly manifested in the remarkable projection of the concha of the ear in the aboriginal inhabitants of some

countries ; such configuration being more favourable to acuteness of hearing, and these savages are remarkable for their delicacy of that sense. The natives of North America and of Ethiopia exhibit extraordinary developments of the organs of smell ; in them the ossa spongiosa and the sinuses are of immense size. Accordingly, we are informed by travellers, that the savages of America pursue their enemies through the desert by the sense of smell alone. The small feet and hands, and the delicate form and complexion so especially remarkable in the females of noble families, or such as have descended through a long line of uninterrupted ease and exemption from labor ; the small feet of the Chinese woman, the disproportioned legs of most of the English peasantry, are all the effects of habit transmitted. The Chinese ladies and English peasantry owe their deformity originally to the pressure of tight shoes and tight lacing. The latter have their ancles and lower parts of the leg so well braced by their *high-lows*, that the joint is nearly deprived of motion ; and the tendons of the gastrocnemii having no play, these muscles for want of exercise, become more like what might be expected in the figure of Starvation than on the legs of an English beef-eater.

Auxerat articulos macies, genuumque rigebat  
Orbis, et immodico prodibant tubera talo.

OVID.

Her joints protuberant by leanness grown,  
Consumption sank the flesh and raised the bone.  
Her knees' large orbits bunch'd to monstrous size,  
And ancles to undue proportion rise.

DRYDEN.

This slenderness of the leg is very common in many of the counties of England, where those short laced boots called *high-lows* are worn from infancy ; and the constant pressure of the leather bracing has had such effects by transmission that the slender leg and *lark-heels* are become natural and heredi-

tary. The large *ossa turbinata* and capacious sinuses of the internal nares, as well as the projecting ears of several savage nations, must have arisen in the early races from the necessity of exercising these organs to the utmost extent. For on the perfection of the senses of which these are the organs, depended most of their safety and subsistence in peace, and the success of their stratagems in war and hunting ; these organs being enlarged by continual exercise, became naturalized habits, which in process of time passed into dispositions in the parent, and produced the essential modifications of the organs in the offspring which the nature of their lives required.

I know not whether the flat sun-dial heads of the Titicacas, and the oblique heads of the ancient natives of Peru, were natural or accidental conformations, and descended to the children ; but there is not much doubt that these crania bear relation to some original habit. This inference is supported by the testimony of the illustrious physiologist, John Hunter, who says, "As animals are known to produce young which are different from themselves in color, form, and disposition, arising from what may be called the unnatural mode of life, it shows this curious power of accommodation in the animal economy, that although education can produce no change in the *colour, form, or disposition* of the animal, yet it is capable of producing a principle which becomes so natural to the animal that it shall beget young different in colour and form, and so altered in disposition as to be more easily trained up to the offices suitable to such changes of form.<sup>1</sup> You will find additional examples of the transmission of peculiarities and acquired habits from parents to their offspring in the article *America*, *Encyclop. Brit.*, vol. ii., 7th edit., p. 653, and in the *Edinburgh Review*, vol.

<sup>1</sup> On the Wolf, Jackal, and Dog.

lxxxiv., at page 457. The macrocephali afford another proof of the position. Hippocrates says, "When the infant is born, and while the head is yet soft and tender, they shape it with their hands, and force it to grow in length by applying bandages and other contrivances adapted to that end, whereby the head loses its spheroidal form. In the beginning custom forced nature to adopt such a conformation; but in the course of time nature became identified with the habit; so that now it is no longer necessary to force her," &c.; and he reasons on to his conclusion thus—"For if bald children are produced by bald parents, blue-eyed children from blue-eyed parents, and squinting children from squint-eyed parents, what should prevent a macrocephalus from being the father of a long-head? If such a conformation is no longer produced as formerly it is because the people, from negligence, have allowed the habit to fall into desuetude."<sup>1</sup> And however absurd the cause may seem which he assigns for such deviations from original form, the same doctrine was lately revived by the illustrious naturalist Buffon; such being the only feasible means of accounting for these naturalized habits. Blumenbach also says the different shapes of the head seen in different nations, are the effect of absurd customs which have in process of time become natural and hereditary.<sup>2</sup> This is not all. Even diseases acquire habits. After having appeared once or twice they probably leave some structural or functional disorder which becomes ever after the predisposing cause of their recurrence. It is in this manner they become constitutional and perhaps hereditary as in the case of mania, epilepsy, gout, rheumatism and many nervous, tuberculous, carcinomatous, and inflammatory distempers: and it is well known to

<sup>1</sup> *περι Αερων Υδατων. Τοπων.* Sect. 1 and 82.

<sup>2</sup> *De Gen. Hum. Var.*

medical men that even some of the organs of the human body, those which are not under the direction of the mind, occasionally contract wilful habits, and proceed to perform altogether new, vicarious, or changed functions, with a precision and regularity as determinate as if they acted under the direction of a will. There is one of the involuntary organs in particular, which from its wayward freaks and vagaries Hippocrates, Plato, Aristotle, the elegant and enlightened Aretæus and others, considered as *an animal within an animal*. But as this is a subject I cannot discuss in these pages, I may only refer to the *πνιξ ὑστερική* as the complaint whence this strange doctrine seems to have received its origin and support. And to those medical gentlemen who may wish to inform themselves on this very ancient and very curious theorem, I will add, by way of parenthesis, a correct reference to the principal authors who have treated of the doctrine. Hippocrates *de Morbis Mulier. Tit. 60, &c.*; and *Tit. 141, &c.*, (Fœs. ed.); also *de Locis in Homine* at the words, *καὶ οἷον σφαῖραι, κ. τ. λ.* Plato in *Timæo*, 62, where he is speaking *περὶ τῆς μήτρας*. Aristotle *de Motu Anim.*, at the words, “*Μάλιστα δε τῶν*”—“*ὥσπερ ζῶον κευχωρισμένον,*” &c., Aretæus *Caus. et Sign. Morb. Acut. 1, 6, passim*. Galen *de Locis Affectis. VI. 5*, where he reasons against the hypothesis. Aetius, *Tetrabib. XVI. 68*, Orisbasius *Synops. II. 47*, Paulus *Ægineta, III. 71*; and all subsequent writers, Latin and Arabian, down to the 17th century, among whom, strange enough, Fernelius is found espousing the ancient doctrine, in opposition to the reasoning and authority of Galen. See *Patholog. VI. 16*. Ballonius *Epidem. II. Const. IV. Æstiva, A.D. 1579*, and *Lib. de Virginum Morb., cap. 10*, where he supports the views of Fernelius and the ancients. I may just add here that Rudius,

Rogierius, and Sanctorius follow Fernelius. Sennertus, Riolanus, and the celebrated and unfortunate Vesalius, and most of the moderns of that epoch hold with Galen.

I have only skimmed over these matters which are worthy of the deepest consideration, to show you the imperious force and tendencies of habit. It is indeed justly considered an essential pillar of the constitution in many cases of disease and accident; in the body physical, like custom in the body politic, it neither can be implanted at once nor be suddenly nor forcibly eradicated without endangering the whole fabric : for, to continue the parallel, if customs are so firmly established in the moral world, that they long survive the fall of states and the destruction of governments ; in like manner some physical habits may become so inwrought in the human system, as you have just read, that their effects continue through generations ; while the sudden desuetude of others associated with the vital actions might be destructive to life. Why, for instance, is the sudden stoppage of an accustomed discharge from any part of the body frequently followed by dangerous metastases, congestive diseases, and frequently death ? Why has Hippocrates, the most accomplished and intelligible interpreter of nature, and the most experienced physician that ever lived, given this precaution ? “ When you are about to cure old hæmorrhoids, unless you keep one open there will be danger of dropsy or consumption.” Why has Celsus, and every practitioner since his day, sounded the same or similiar notes of warning, if habit be not identical with nature ? For when once it is fixed in the constitution, and all parts of it have been brought to harmonize with the adopted arrangement, it becomes while it lasts, as much a part of the system, as any of its constituents. This seems to have been the opinion of philosophers of

all ages. Hippocrates declares "habit to be so powerful that any sudden deviation from it brings no small injury on the body."<sup>1</sup> Galen knew well the influence of habit when he wrote that, "habit conspires with nature in effecting the same end, for which reason it has been appropriately said that habit is an adscititious nature, εθος επικτητος φυσις;"<sup>2</sup> and he adds in another place—"Nature always rejoices in things to which she is habituated."<sup>3</sup> Pliny the Naturalist considers habit to be "the most potent master of all things." Macrobius like Galen, calls it a second nature,<sup>4</sup> Gellius, "domina rerum."<sup>5</sup> Marius boasts that his life had been spent so much in beneficent actions, that the doing good had changed from habit into nature—benefacere jam ex consuetudine in naturam vertit.<sup>6</sup> On the same principle is probably founded that fine precept of the Pythagoreans. "Optimum vitæ genus eligito nam consuetudo faciet jucundissimum."—Choose the most useful occupation, for habit will render it the pleasantest. Olaus Magnus shows by an elegant climax how habit enslaves the body in vice. "Voluptas enim ipsa, usum, et consuetudinem: consuetudo necessitatem; necessitas desperationem inducit et coartat."<sup>7</sup> I recommend you to read that curious old work. Ludovicus Cornelius begins his elegant little treatise *De Vitæ Sobriæ Commodis* in this manner:—Certum est usum in hominibus successu temporis verti in naturam; ita ut illos quodammodo cogat ad ea usurpanda quibus consueverunt, sive bona ea sint, sive mala. Pari modo in multis rebus videmus usum consuetum habere plus virium quam rationem." Fuchsius says, "habit is a certain tendency and faculty of

<sup>1</sup> De Vict. in Acutis.

<sup>2</sup> Lib. de Motu Musculorum, ii. 17.

<sup>3</sup> Meth. Therap. viii. 8. See also his Libel. de Consuetudine; and de Hygiene, v. 8.

<sup>4</sup> Saturnal, lib. vii. cap. 9.

Salust. Bel. Jug. 85.

<sup>5</sup> Noct. Att. xii. 13

<sup>7</sup> Hist. Gent. Sept. ii. 22.

always acting or suffering in the same way, contracted by use in things both friendly and adverse to nature." And, "So great is the consent of habit with nature, that the *one passes into the other*, insomuch that, what we are accustomed to becomes itself natural, as has been appositely said by the ancients, habit is an adscititious nature ; i. e., a certain fundamental power, not indeed ingenerated, but acquired by use, which is hence congenial with our nature, and it appears *to be nature itself indeed*, except that the former springs from an external, the latter from an internal and innate principle."<sup>1</sup> The elegant scholar and accomplished physician, Dr. John Gregory, says, "If we would inquire into the cause of our weak and sickly habits, we must go back to the state of infancy ; the foundation of the evil is laid there. Habit soon succeeds in the place of nature, and however unworthy a successor, requires almost equal attention."<sup>2</sup> Bernardino Ramazzini, to whom I frequently refer, and always with pleasure, says, in his comment on Cornaro's book, just quoted, *on the Advantage of a Sober Life*, "*Non immerito sane consuetudo altera natura passim audit ; magna enim et admiranda est illius potestas, afficit quippe non solum corpus sed etiam animum.*"

In truth you will find habit to be the tightest dress you can wear : no one but he who has made the attempt to divest himself of it can fully appreciate the closeness of its adhesion. Galen hints that it would be as safe to skin a man as to strip him of his habit ; I think it would be as well to kill him at once as to force him to abandon it without gradual desuetude. Since, therefore, we are to consider habits as supplemental natures, which influence the whole human organization and intellect, does it not appear to be a preposterous interference with the private concerns,

<sup>1</sup> Inst. Med. ii. v. 5.

<sup>2</sup> Comp. View, &c., p. 79.



comforts, and perhaps the health of our brethren, to urge, or even to advise gratuitously or mercenarily the *sudden* relinquishment of any of our habits? In a very long professional acquaintance with the various temperaments and idiosyncrasies of human nature, I can say with truth, that I have never known a deep-rooted habit suddenly disused with safety or permanent success. Indeed, I have never known or heard of a habit of this sort abruptly abandoned, which was not followed by very distressing or dangerous consequences; and I am not a little surprised to find men of education and judgment emphatically preaching the pernicious doctrine: and it is particularly grievous to find some professional men insisting on the immediate and unconditional abandonment of such and such habits, without reflecting that the constitution requires to undergo the same gradual process of training to fit it for the *disuse*, as was necessary to accommodate it to the *acquisition* of the habit. It is inexpressibly painful to see a person who has been forced to renounce his habit of smoking or snuff-taking, for example, either by accident or design; the restlessness, the anxiety of mind, the care-worn looks, and the guilt-like uneasiness, occasioned by the imperious craving of the appetite for its accustomed stimulus or sedative, can be likened to nothing so much as the disease *Nostalgia*, to which the people of mountainous countries are subject when long absent from their native homes; any one who has witnessed this disease operating in all its intensity, would never afterwards be able to divest his memory of the painful and appalling spectacle; and to such a state have I seen the victim of ill-timed and impertinent advice reduced.

It is the indifference or forgetfulness respecting its union with our nature which has given rise to the belief, *that they may be safely and at once aban-*

done. That the hypothesis is evidently the suggestion of a philanthropic and Christian spirit I cannot doubt, but in reducing it to practice, particularly in respect to many of the physical habits which form part as it were of life itself, and it is to them I chiefly allude, it is a dangerous and almost impracticable doctrine. It cannot be admitted even, as is often urged in support of the thesis, *that because many of the habits, moral and physical, are either absurd, ridiculous, or vicious, to eradicate them at once can involve neither danger nor difficulty, and that it is consequently a peremptory duty to dismiss them vi et armis.* Because it may be asserted, and the history of society is evidence, that the most absurd customs are those which longest resist the force of reason, the ridiculous are permanent, since they are uninjurious, but the vicious are commonly so deeply rooted in the rich soil of a corruptible nature, that they cannot be extirpated by violence—they will only yield to address and time, by cultivating a course of action of an opposite tendency. Seneca observes, “Nulla enim sapientiâ, naturalia corporis aut animi vitia ponuntur; quicquid infixum et ingenitum est, lenitur arte, non vincitur.”<sup>1</sup> But I cannot go the whole length of this sentiment, for I am convinced that the human mind is capable of disentangling itself, and the body too, from the worst snares in which evil habits or vices may have involved them, if it be subjected to the corrective influence of resolution, energetic self-control, intellectual amusements, and the avoidance of idleness. But these effects can only be produced by time, patience, and perseverance. Besides—

There is some soul of goodness in things evil,  
If men observingly distil it out.

SHAKSPEARE.

<sup>1</sup> Epist. 11.

The difficulties of surmounting inveterate habits are confessedly formidable, but

The wise and prudent conquer difficulties  
By daring to attempt them. Sloth and folly  
Shiver and shrink at sight of toil and danger,  
And make the impossibility they fear.

Row.

And as a hint towards decision of character, may be added the fine apostrophe of Young,—

Is nothing more than purpose in thy power?  
Thy purpose firm is equal to the deed.  
Who does the best his circumstance allows—  
Does well, acts nobly, angels could no more.

For although habits are mostly formed in the first twenty-five years of life, yet they are acquired even at a considerably advanced age: and it is on a groundwork of new and better habits superseding bad ones that some of our most enchanting views of intellectual enjoyment are founded, as well as some of our most cheering and delightful prospects of futurity. In one redeemed from the dominance of bad habits, or initiated into new and better, “the mind,” says Dugald Stewart, “awakening up from a trance to a new existence, becomes habituated to the most interesting aspects of life and of nature; the intellectual eye is purged of its film, and things the most familiar and unnoticed disclose charms invisible before. The same objects and events which were lately beheld with indifference, occupy now all the powers and capacities of the soul. The contrast between the present and the past serving only to enhance and endear so unlooked for an acquisition.”<sup>1</sup>

<sup>1</sup> On the Cultivation of Intellectual Habits.

## LETTER XIV.

Διὰ τέλεος οὖν μαρτυρεῖ ταῦτα πάντα ἀλλήλοισι, ὅτι πάντα ἐξαπίνης μείζω πολλῷ τοῦ μετρίου μεταβαλλόμενα ἐπὶ τὰ καὶ ἐπὶ τὰ, βλάπτει.

HIPPOCRATES.

I HAVE stated above that habits often protect the body under circumstances in which it would be destroyed without them. One of the most sensible physicians of antiquity says,—*Consuetudo nihil aliud prodesse quam ut non plurimum noceantur corpora potest.*<sup>1</sup> But notwithstanding all their utility the effort to familiarise the constitution suddenly with them, or to relinquish them abruptly when formed, is equally contrary to reason and to safety. I have already quoted Hippocrates pronouncing habit to be so powerful that the sudden disuse of it brings great detriment to the body. For the same reason Celsus says, “When one wishes to change his way of living he must *habituate* himself to it by degrees.”<sup>2</sup> “*Ne subito muta assueta,*” says Hoffman, “*quia assuetudo est altera natura.*”<sup>3</sup>—Make no sudden changes, for custom is another nature. There is no lack of cautions and precepts indeed on this point. But, in the language of Seneca, example is better than precept: it is a shorter and better road to the understanding.—*Longum iter est per præcepta, breve et efficax per exempla.*<sup>4</sup> Thomas Parre, a peasant of Shropshire, was the oldest man except Jenkins, of whom we have any authentic record. Parre outlived nine sovereigns, and died in the tenth year of the tenth, at the age of 152 years and nine months. He

<sup>1</sup> Cœlius Aurelianus, *Morb Acut.* i. 16.      <sup>2</sup> *De Medicina*, i. 3.

<sup>3</sup> *Operum.* t. v.

<sup>4</sup> *Epist.* 6 and 52.

expired in 1635, and the immortal Harvey who dissected him states, "that he found no decay in any of his organs, and he might have lived much longer had he not changed his *simple habit* and diet by becoming a dependent in the Earl of Arundel's family."<sup>1</sup> According to Taylor his biographer, he lived only six weeks after he came to London, and died of congestion of the lungs brought on by the sudden change of his old habits, from the coarse and simple diet and pure air of the country, to the luxury of a palace, and the impure atmosphere of a city.<sup>2</sup>

The fate of Parre confirms the saying of Galen, that "An old man if he should attempt gradually to change even a bad habit of long standing in order to live better, he could not accomplish it, he would labour in vain."<sup>3</sup> Hippocrates says, "Things to which we are long accustomed, though they may be worse, are less likely to injure us than those things to which we are not accustomed."<sup>4</sup> Our own great moralist declares, that "Custom is commonly too strong for the most resolute resolver, though furnished for the assault with all the weapons of philosophy." "He that endeavours to free himself from an ill habit," says Bacon, "must not change too much at a time, lest he should be discouraged by difficulty, nor too little, for then he will make but slow advances." "This is a principle," continues Dr. Johnson, "which may be applauded in a book, but will fail in the trial, in which every change will be found too great or too little. Those who have been able to conquer habit, are like those who are fabled to have returned from the realms of Pluto.

——— Pauci, quos æquus amavit  
Jupiter, aut ardens evexit ad æthera virtus.

VIRGIL.

<sup>1</sup> Phil. Trans., vol. iii., p. 887.

<sup>2</sup> Harleian Miscellany, vol. iv.

<sup>3</sup> Hygienè, v. x.

<sup>4</sup> Aphorism, 50, sect. 2.

They are sufficient to give hope, but not security, to animate to the contest, but not to promise victory."<sup>1</sup>

Many years ago, I witnessed the folly and injustice of attempting to break the habit of snuff-taking abruptly in an inveterate slave to that absurd practice—in truth I was a party concerned. Influenced by the incessant importunities of two maiden aunts of the gentleman, to give my support to their clamorous exhortations to renounce the snuff-box, and being at that time young and inexperienced, I was yielding enough to give their solicitations the sanction of professional advice. The attempt to make him leave off the habit at once was made ; and the recollection of the consequences that resulted from the disuse, will never leave my memory. It taught me more practical wisdom than I had learned from many years' reading of the theories of book-makers, and writers on diet. The young man commenced the ordeal, but he soon became frightfully restless and wild, and you would have thought that like Orestes he was haunted by the furies of his murdered parent—

*Illum et parentis credideris sui  
Fregisse cervicem, et penetrاليا  
Sparsisse, nocturno cruore  
Hospitis —————*

HORACE.

He next lost his appetite, became melancholy, and seemed to be fast merging into insanity. I was again consulted on his alarming case, by the same imprudent but well meaning aunts, who persisted in ascribing even the present symptoms to the permanent effects of the snuff. But by this time I had taken a different view of the case, and persuaded them to place his snuff-box before him :—the dog returned to his vomit, and he soon recovered both his corporeal and mental health. To this you

<sup>1</sup> Idler, 27.

may add the experience of the illustrious Dr. Cullen with respect to snuff-taking.<sup>1</sup>

The same rule holds stringently in many other examples of the application of medicine to disease, for instance, in the insanity of drunkards, called *Delirium tremens*; few practitioners would be successful if they did not act strictly with a view to the previous habit; nor would it be good practice, *cæteris paribus*, to withdraw at once, or withhold any accustomed stimulus. This reminds me of an excellent practical old bacchanalian precept, which I have often heard prescribed for the indescribable horrors arising from yesterday's debauch: "Take a hair of the dog that bit you;" which, by the way, is a very ancient prescription, and may be found among the health-aphorisms of the celebrated Schola Salernitana,

Si nocturna tibi noceat potatio vini  
Hoc tu mane bibas iterum, fuerit medicina.<sup>1</sup>

M. Andral mentions the case of a drunkard who was thrown into prison and put on prison diet; he then became affected with delirium tremens; he was ordered a certain quantity of spirits and water and recovered immediately.<sup>3</sup> I cite this case merely as an illustration. A gentleman on whose veracity I have every reason to place the most implicit confidence, informs me that during the last short war with America, the price of tobacco rose so high that the poor in his neighbourhood could no longer afford to purchase it; snuff however had not risen in equal proportion. There was one poor mason in particular to whom the habit was so much a second nature, that when compelled by necessity to relinquish it, became stupid, restless, and *so blind* that he could no longer exercise his trade. His very existence

<sup>1</sup> Materia Medica, vol. ii., p. 437.

<sup>2</sup> C. xv.

<sup>3</sup> Precis d'Anatomie Pathol. v. ii.

seemed to depend upon his quid; and it is impossible to say how he would have fared, had not the same necessity suggested the following ingenious substitute,—he procured snuff and wrapped it up into little packets with linen rag, and chewed one occasionally instead of tobacco, by which he soon recovered his energies and sight. To talk, therefore, of leaving off a habit at once, like putting off a doublet, reads very well in books, but is another thing in practice.

Beside the power of accustoming one's self to simple, innocuous, or pleasant things, you have numerous examples of the possibility of habituating the body or parts of the body to things the most injurious to the tissues, and repugnant to the taste; and it must afford more than common gratification to a philosophical mind to contemplate the readiness and accuracy with which nature gently constrains organized beings to accommodate themselves to sudden and violent accidents and apparently the most adverse to the principle of vitality; at first adopting salutary modifications from necessity, and finally making them her own for the maintenance of life, and the performance of the vital functions with undisturbed regularity and harmony; illustrating that fine saying of Seneca, *Necessitas fortiter ferre docet, consuetudo facile*—"necessity teaches to bear with fortitude—habit with ease."

As an example of no unusual kind—in the operation for aneurism in any of the large blood vessels of the body, say those of the thigh, no sooner is the immense stream of nutriment cut off, than nature true to her purpose, commences the process of dilating all the remaining arteries, which is first manifested by a general throbbing and an unusual sensation of heat in the limb, caused by disturbance of the nervous principle; and so determined are her purposes that the proper and due quantity shall be maintained, that in a short



time all the neighbouring arteries are found to have gained so much in calibre as to contain in the whole the exact quantity which circulated in the limb in its sound state.

The protective power of habit is very singularly manifested in the faculty which the stomach acquires of resisting the effects of the most virulent poisons. Galen treating of the properties of hemlock cursorily notices this fact. He says, "If a very small portion be taken into the stomach it will not destroy life, a result which the case of the old woman of Athens has confirmed by experience. The circumstance is well known to every one. She began taking a very minute dose, and increased by degrees until it amounted to a prodigious quantity without injury. At first the portion she took was innoxious from its parvity; but as the dose increased, and she persevered, the habit became confirmed, and rendered the poison natural."<sup>1</sup> This fact of poisons being rendered innocuous by habit is further exemplified by the Theriaki, or opium-eaters of Egypt and Constantinople. The quantities of this drug which they can take with apparent impunity are astonishing. Prosper Alpinus says, "The Egyptians use opium very frequently, to which, after a long time, they become so accustomed that some can take the weight of three drachms at once, with perfect impunity," &c. —"Hence," he adds, "I suppose it happens that those who are accustomed to devour it every day, upon suspending it for one day undergo the most distressing symptoms at the same hour when they were in the habit of taking it."<sup>2</sup> But one of the most extraordinary cases of poison eating on record is related by Poucqueville. Speaking of a Theriaki who was a phenomenon of longevity considering the time these people usually live, he says, "This

<sup>1</sup> Simp. Med. Fac., iii. 18.

<sup>2</sup> De Medicina Ægypt, iv. 1.

man was well known all over Constantinople in the year 1800, by the name of Suleyman Yeyen, or Suleyman the eater of corrosive sublimate, &c. He had early in life habituated himself to taking opium ; but notwithstanding that he constantly increased the dose, he ceased to feel from it the desired effect, and tried corrosive sublimate, the effects of which he had heard highly spoken of. For thirty years this old man had never ceased to take it daily, and the quantity he could now take at one dose exceeded a drachm"<sup>1</sup>—(which in France weighs seventy-two grains.)—This fact is well attested ; and there is no doubt that had this man left off his habit suddenly, the want of his poison would have shortened his days ; so dangerous is it to change one's mode of life in old age. Sanctorius relates a singular instance of the force of habit.—“ An individual who had passed twenty years of his life in a dark and noisome dungeon, the air of which had become quite infectious, was, upon the expiration of his imprisonment set at liberty ; but the change of air and diet, instead of imparting health and vigour to his blanched and enfeebled frame, so altered his health for the worse, that he could find no means of restoring it, until he was again at his own earnest desire restored to the same infected cell where he had spent so many years for his crimes.”<sup>2</sup> Combe, the author of *Dr. Syntax*, a man of the most varied fortunes, and first-rate talents, became so enamoured of his prison after a confinement of fifteen years in the King's Bench, that he declined the offers of his friends to obtain his liberation, on account of the trouble it would give him ; observing, “ that if he were again at liberty, and established in the most pleasant spot round London, he should only feel perplexed by having to choose his walk.”

<sup>1</sup> *Travels in Greece and Turkey*, p. 298.

<sup>2</sup> *Methodus Vitandorum Errorum qui in Arte Medica contingunt*.

When attending the hospital in the year 1817, I witnessed the lamentable result of suddenly changing a *recently* contracted habit, in a poor countryman whose thigh had remained dislocated for the space of four months. He had got somewhat *used* to the accident, but because he halted in his gait, his wife urged him to have it reduced. The surgeons of the hospital forewarned him frequently and solemnly of the probable consequences : but in subservience to his wife's vanity, he persisted in desiring to have the dislocation reduced. Accordingly, after the usual trouble, the thigh was restored to its natural position ; and the result was that in twenty-four hours the man was a corpse ! He died in convulsions.

Zacutus Lusitanus, in one of his "Observationes" relates a curious instance of the power of habit. When Sebastian, King of Portugal, was travelling from Coimbra to Lisbon, he was received by the people of a certain maritime town with such demonstrations of joy, that they all burnt incense before their doors, and the ground on which he walked was strewed with flowers ; so that the air was filled with incense, and resounded with music and the acclamations of the people. It happened that a fisherman, desirous of seeing the pageant had mingled in the crowd, and being seized with a sudden giddiness, fell down like a person in apoplexy, and was obliged to be carried to the nearest house, but could not be restored by any measures the physicians employed. The King then, moved with pity, sent to his relief Thomas a Vega, his chief physician, who having learned the case, and suspecting that he had been overpowered by the unusual odour of the incense, ordered him to be carried instantly to the sea shore to which he had been all his life accustomed, and there to be covered over with wraik and sea weed ; and shortly after this was done, the man

was restored by the accustomed smell. Aretæus alludes to the force of habit ; but it is impossible to do justice to his elegant language in a translation. In his treatment of phrenitis, he says Habits, or things to which we are accustomed, will procure sleep ; to the sailor, lying on board ship, and sailing about on the sea, the sound of the shore, the murmur of the waves, the rustling of the winds, and the smell of the sea and of the ship ; to the musician, playing on the flute in silence, or singing to the harp or the lyre ; or the exercise of children in singing ; to the schoolmaster, the relation of childish stories, &c.<sup>1</sup>

I wish here to reconsider the case of the old man mentioned by Vanderwiel, in whom it is made to appear that life was virtually supported by the habit of smoking ; for the case seems from the way in which it is laid before us, to intimate that he had lived some time on the aerial diet alone ; also to the lunatic confined in the madhouse at Haarlem, who we are led to suppose lived forty days on the smoke of tobacco and a little water. Both these cases seem incredible or inexplicable. The habit of using tobacco might for a limited season still the sensations of hunger ; but the smoke of tobacco could not in the smallest degree supply the waste of the body. The madman's case is physically impossible ; however if these two singular cases be true, they bear a striking likeness to that of Democritus of Abdera, already alluded to, who had always been extremely fond of honey, and upon which he had lived during the greatest part of his life. Athenæus says, " It is reported of him that when he had become worn out with old age, and wearied of life, he resolved to starve himself to death by withdrawing a portion of his food every day ; but the festival of Ceres, called the days of the Thesmophorii being at hand, the

<sup>1</sup> Οξενν νουσ. Θεραπ. i., 1.

females of his household implored him not to die until these were over that they might be enabled to keep that solemn festival; he consented, and ordered a pot of honey to be placed near him, and thus he prolonged his life for several days, supported by the smell and *halitus* of the honey alone. When the festival was over and the honey removed, he died in a few days.”<sup>1</sup> These instances give some colour and support to a problem of Richerand, who asks, “May not death be considered a natural consequence of the laws of sensibility? Life depending on the continual excitement of the living solids by the fluids which moisten them, ceases, because the parts endowed with sensibility and contractibility, after long habitude of the impressions of those fluids, lose their capacity of feeling them. Their action gradually extinguished, would perhaps revive, if the energy of the stimulating power were increased.”<sup>2</sup>

I should here call your attention to another danger connected with habits, particularly those relating to the taking of poisons, which is, that it is equally dangerous to increase the dose suddenly, or make any violent change in the acts in which the habit consists, as it is to break them off abruptly when contracted. Such rash procedure will operate on the constitution with the same virulence as if no habit had been induced, and it will be dangerous to life according to the degree in which the increased intensity, or impression is made on the constitution. For, as I have before remarked, neither sudden impressions form a habit, nor can the system, even when inured to any set, sustain the shock of them when suddenly increased; they would then prove injurious—perhaps indeed break what they were only intended to bend. You will better understand this by examples. Gmelin cites two

<sup>1</sup> Deipnosoph, lib. ii.

<sup>2</sup> Elem. Phys.

instances of death occasioned by excessive smoking. One of the persons died shortly after finishing seventeen pipes, the other eighteen, at one sitting. In both these cases we are to suppose the habit of smoking moderately had been fully formed, but the custom of smoking *seventeen* or *eighteen pipes* had not, and the constitution suffered the same degree of violence and injury from the additional number of pipes beyond the usual quantity, as if the habit of smoking had not been formed at all. Perhaps the system might have withstood the shock of twelve pipes or so without absolutely incurring death; but in all cases where change is contemplated, the system ought to be humoured and broken in by degrees. In illustration of the evil of attempting to acquire the habit of smoking at once, my friend Dr. Marshall Hall of London, relates the case of a young man who smoked two pipes for his first essay; he was seized with nauseous vomiting, syncope, stupor, stertorous breathing, &c., and continued in this state for two days; he recovered, however, but at great risk. So that you might say—

Nutritur vento, vento restinguitur ignis,  
Lenis alit flammas, grandior aura necat.

OVID.

These cases are submitted to the consideration of the beginner who may be anxious to acquire the habit at once, as well as to the fool-hardy adept who, trusting too much to usage, without consideration suddenly indulges to excess the increasing demands of his appetite.—

*Voluptates commendat rarior usus.*—JUVENAL.

Milo carried an ox for the length of a stadium at the Olympic Games; but Milo could not have carried the ox had he not first accustomed himself to carry the calf every day until it grew into the

ox ; and I have no doubt that if the weight of a cat had been suddenly added to that of the ox whilst on Milo's shoulders, Milo would have sunk under the load. I would wish you to remember also that even the Hippocratic doctrine of gradual change will not always avail.

I have proceeded further with this subject than I at first intended, to show the relation habit bears to nature, the difficulties of overcoming it, and the imminent danger of renouncing it suddenly. If my views are correct, and you have seen they are supported by no mean authorities, it would be nugatory to expatiate on the danger of dissuading people from their established modes of life. I never knew an instance of an inveterate smoker or snuff-taker who, in attempting to regenerate himself, would hold out in the virtuous course. I believe it is next to impossible to divest one's nature entirely of the uncontrollable longings of the appetite, the feverish restlessness and uneasiness attending the sudden desuetude of tobacco ; and if not left off abruptly—a hazardous proceeding—I am of Dr. Johnson's opinion, that half measures will not do ; yet I believe, notwithstanding what has been said, that a gradual retrenchment, if one could muster up fortitude to persevere in the attempt, might effect the object in course of time. " Those who are in the power of evil habits," says Johnson, " must conquer them as they can ; and conquered they must be, or neither wisdom nor happiness can be attained ; but those who are not yet subject to their influence may by timely caution preserve their freedom ; they may effectually resolve to escape the tyrant whom they will very vainly resolve to conquer."

## LETTER XV.

————— Sapere aude,  
Incipe. Vivendi recte qui prorogat horam,  
Rusticus expectat dum defluat amnis ; at ille  
Labitur, et labetur in omne volubilis ævum.

HOR.

Begin, be bold, and venture to be wise ;  
He who defers this work from day to day  
Does on a river's bank expecting stay,  
Till the whole stream which stopp'd him should be gone,  
That runs, and as it runs, for ever will run on.

TOBACCO then, as you have seen in the preceding pages, has a world wide celebrity. It is known and used from pole to pole, and its supporters have encumbered it with a load of virtues it cannot sustain.

————— Siquis tantas rimari indagine causas  
Aggreditur, multum immani sub pondere sudet.

THORIVS.

It has often, they say, proved of essential service in supporting the strength and vigor of the body in the perils and privations of adventures by sea and land : it is a pastime in the tranquil retreats of luxurious ease ; a relief to the spirits in the mind-wearing toils of academic ambition, and a solace in the cabins of want and misery. The divine Isaac Barrow resorted to this panpharmacon whenever he wished to collect his thoughts. Bacon writes that the taking of tobacco doth help and discharge lassitude. It refresheth the spirits by the opiate nature thereof, and so dischargeth the weariness.<sup>1</sup> The philosopher Hobbes could do nothing without a dozen pipes lying ready filled beside him. Sir Isaac Newton brightened his

<sup>1</sup> Nat. Hist., cent. viii., sect. 170.



intellect with an occasional whiff, and discovered the relation which the fall of an apple bears to the centre of the earth, through a nebula of tobacco smoke. Dr. Parr's face was always smutched with its sooty fumes, and his fingers begrimed with the juice and ashes. Philosophy and dirt are often found thriving in close fellowship. Diogenes the Cynic lived in a greasy tub, and never changed his dun rags till they fell off his back, or became animated and crept away; and the Apostate Julian, the emperor of Hypocrites, was so devoted to the study of natural history that he converted his beard into a menagerie, as he boasts in his *Misopogon*, to the good people of Antioch—*πωγωνα τουτα τοι διαθειοντων ανεχομαι των φθειρων οσπερ εν λοχη θηριων*.

The usual long life of moderate smokers shows that on them at least its ill effects have not been developed. To thousands and tens of thousands it is asserted to have proved a solace and a comfort in sickness and in sorrow: that to the poor man inured to a frugal use of the herb, it has often served as a temporary substitute for everything that goes into the mouth, and a sovereign remedy for every evil: that "the shuddering tenant of the frigid zone" would think "his life were vile—a tedious circle of unjoyous days," if the gloom of his dreary and eternal winter were not cheered by the exhilarating luxury of his pipe, to procure which he frequently exposes himself to danger and risk of life; and the "naked negro panting at the line," would barter all the fragrance of his "spicy groves" for the "soothing incense that fumes beneath his nose." To the wandering Arab also in his excursions through deserts where, in the words of Collins—

——Rocks alone, and tasteless sands are found,  
And faint and sickly winds for ever howl around—

tobacco is the principal comfort and enjoyment of his life, and frequently his only sustenance. The

sailor accustomed to the poison endures the severest privations, undergoes every hardship, and faces death in every form with indomitable fortitude and resignation, as long as he is supported by his quid and his pipe ; but withhold from him the consolation of his good genius only for one day, and mark the altered man ; he is no longer the same either in intellect or in physical power ; he crawls about the deck uneasy, stupid and churlish, and appears to be labouring under some load of mental or bodily affliction. Lastly, "in New South Wales" says Matthews, in his *Emigration Fields*, "in the case of convict slavery, where civilized man is subjected to the thrall of his fellow-man, and where the feeling of degradation is embittered by the sting of guilt, tobacco smoking may be necessary ; it is even said that great numbers of the convicts would commit suicide or take to the bush if they did not receive tobacco to drown conscience and thought. Tobacco-smoking is a means of soothing misery and repressing energy by inducing a dreamy stupefaction."

Now granting all this to be strictly true, although there is no proof of truth in these propositions, the same arguments may be used in support of any other pernicious habit ; nor does it diminish the force of the reasons deduced from experience and alleged throughout these pages against the indulgence in tobacco, to say that when the habit has once been acquired it has this or that salutary effect on the mind or on the body. The desperado who has accustomed himself to swallow arsenic, corrosive sublimate, strychnia, hemlock or opium, will, everything considered, be as able to fulfil all the engagements of life as the slave to smoking, and will, on the contrary, be as spiritless and incapable of action without his usual sedative, as the latter.

But the success of such experimentalists and their good fortune in escaping destruction surely

afford no just grounds for urging that these habits are either necessary or useful, seeing that people can exercise the powers of their minds and the skill of their hands with equal ease, expedition, and equanimity without them, to say nothing of the almost certain enjoyment of the transcendent blessings of sound constitutions, strong and vigorous minds, and a constant equability of the active energies. Will the most enthusiastic devotee of tobacco then seriously affirm that the sailor, for example, who has not contracted the habit, is in any respect less able to perform all the functions of his arduous calling, whether in peace or in war, in calm or in storm, than his narcotised mess-mate who cannot tell the points of the compass until his mouth is crammed with poison? and further, will any one deny that the former has this supreme advantage over the latter, that his courage, alacrity, vigor, and presence of mind are always the same in safety or in danger, whether there is plenty or scarcity of tobacco, whilst the courage, the temper, and the general fitness of the other for his duties are continually undergoing barometric changes, according to the plus or minus of his sedative, as I have described him in a preceding page?

The inevitable conclusion is, that the man unschooled in the mystery of these smoky orgies always enjoys a state of temper and mental consistency which enables him to proceed in one even tenor with all his occupations, while the other is in that happy condition only when the intolerable gnawing of the sub-inflamed membranes of the stomach and duodenum are soothed by the perfidious anodyne influence of this deleterious narcotic, operating on the nervous system like additional cups of brandy on the drunkard.

Hence neither Isaac Barrow the divine, nor the philosopher Hobbes, nor "the poor man inured to

the habit," nor "the shuddering tenant of the frigid zone," nor "the naked negro panting at the line," nor "the wandering Arab," nor the New South Wales convict, would have performed his respective duty one jot less efficiently if he had never experienced the calming influences of tobacco. The gist of the argument and all the philosophy of smoking simply amount to this: the man who uses tobacco, first creates in his stomach a disease, and next a want a thousand times more intolerable than the disease; and then he smokes and smokes, and smokes to satisfy that want, and so goes on aggravating the evil.

I have little to say to the immoderate smoker; like all other excesses, "this indulgence sows the temples with untimely snow." The sword of Damocles hangs over him by a hair, and is every moment threatening to fall on his head; one might with aptness apply to the devotee of this luxury, what Juvenal said of the ancient nobility of Rome, that the occurrence of old age amongst them was looked upon as a miracle—

*Prodigio par est in nobilitate senectus.*

But I would exhort the youthful aspirant to the honors of this abominable custom to shun the voice of the charmer; there is more virtue in avoiding than in abandoning a bad habit:—

"Better to shun the bait than struggle in the snare."

*Virtus est vitium fugere; et sapientia prima  
Stultitia caruisse.*—————

HORACE.

Galen admonishes you to attempt the change of such habits as are hurtful, even if you have been familiar with them from childhood;<sup>1</sup> and Cælius Aurelianus recommends you to acquire only such habits as are conducive to your general welfare,

<sup>1</sup> Hygiene, v. 10.

and strenuously avoid contracting those which are inimical alike to your health, your morals, and your interest.—“*Nos vero oportet consuetudinem rerum utilium facere, noxarumque fugere.*<sup>1</sup>

In conclusion, you must have perceived from the tenor of the foregoing pages that the design of writing them was to fortify you against the powerful influence of bad example and the seductions of a vile and pernicious practice. The use of tobacco as a luxury is founded entirely on a false and vitiated taste originating in the force of example, and the invincible impulse to imitate, and is always more or less injurious to the health. You yourselves have now had the opportunity of forming a correct judgment of it; and view it in what temper of mind you may, I am convinced it is impossible you can have arrived at any other conclusion.

Tobacco is not a human necessity, there is no reason or instinct suggesting its use; there is no want it can supply; there is no disease it can cure; there is no suffering it can mitigate without danger. The habit therefore is as superfluous as it is irrational and disgusting; and carried in this country to a MADDENING extremity.

We can afford to admit indeed that the custom of smoking, chewing, and snuff taking is less vicious than loathsome. But all the force of the admission is lost in this serious drawback, that the habit is one of a certain group which naturally manifests an unconquerable affinity for others of a worse character. It always has a downward tendency: and, like gravity in the scheme of the universe, it becomes the centre of attraction to all the obliquities in human conduct.

Although therefore it involve no particular moral evil in itself, it is to be condemned, because among other weighty reasons, it is the beginning of culpable extravagance both in its separate and

<sup>1</sup> *Morb. Acut.*, i. 16.

social conditions. Extravagance is very often the parent of want, and want the mother of crime ; for it is

—— the curse of every evil deed,  
That, propagating still, its brings forth evil.

SCHILLER.

Small beginnings have frequently great issues. Remember that he who can wink at peccadillos will soon learn to look unmoved upon crime. The history of human depravity is written with blood, and it warns you by myriads of examples that small vices unchecked grow apace, ripen, and become the prolific parents of great ones. And what is this but the progress of habit? **BAD HABIT.** The tyro in vice grows bolder and the habit stronger by every successful repetition of the act. In the triumph of crime then you discover simply the practical maturation of evil habits. They steal upon you with the noiseless pace of the tiger ; and the danger is that they may be established before you are aware they are begun. Hence the “fearful power which they may acquire over the whole moral system.”

One of the main sources of human happiness lies in the normal conditions of the bodily health and of the mental functions, in their relation to our moral conduct and the quality of our habits ; and with bad habits “there is no health in us.” Hence it may be justly argued that every man is the arbiter of his own fate. It is therefore of the first importance that you begin early to exercise over yourselves a vigorous self-control. *Γνωθε σεαυτον* is an exhortation well worth your study : it is a heavenly ordinance, for it is only by self-knowledge that you can efficiently exercise a discriminate and salutary self-control. The wise Socrates held that self-knowledge and self-control were the two essential requisites to the practice of virtue. In order therefore to be successful it is

indispensable to begin in season, to scrutinize every act of the will and every process of the understanding. For when these, by frequently passing through the mind, shall have established relations with the brain and become confirmed habits, your moral feelings and your whole conduct in life will be precisely what these habits shall make them. Whatever be their quality they are your masters, and you must serve them on their own terms, Every sentiment and every action must be the consequence of their imperious will; and your moral character will receive its most important and lasting bias from the influence they exercise over you. The moral character is simply an aggregate of habits—habits of thought or of action,—virtuous or vicious in their tendencies, as it may be.

And although the most rigid of moralists can never expect heroic virtue in any mortal in the present condition of humanity, because he would expect an impossibility, yet you should never forget that the chief aim of all mortals can only be attained through a course of good habits, approximating as near as possible to human excellence. The simple attempt at perfection in moral virtue is a step towards the prize, and if continued will become of itself a commendable habit tending to enlarge your capacity for more exalted intellectual enjoyments; besides, while you are aiming at good you are abstaining from evil. Therefore examine scrupulously every inclination of your will, and let no mental process, or physical act be repeated or tolerated without considering well the moral results likely to ensue. You will soon find, to your honor and your happiness, that good habits thus engraven, as it were, on the soul by a well sustained discipline are more than promise of improvement in virtue; and “improvement in virtue must be advance-

ment in happiness if the government of the universe be moral.”<sup>1</sup>

In the distracting turmoil of life it is impossible you can always so nicely discriminate between the lighter shades of right and wrong as to escape all the spells and allurements of vice, masked as it is by the garb of simplicity and innocence which the circumstances of the world frequently throw around it ; when—

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e'en virtue  
Will sometimes bear away her outward robes  
Soiled in the wrestle with iniquity.

SCHILLER.

But the monitions of the moral sense, the whisperings of the still small voice of conscience are always audible to the attentive ear, and if harkened to will assuredly tend to prevent repetitions of errors—the materials of which evil habits are constructed.

That voice informs you that virtuous actions are accompanied by no pain, no regrets, no remorse ; they leave a gladness and tranquillity in the soul which come nearest the peace of Heaven, while vice has sorrow and shame for inseparable companions, which engender in the heart a worm that never dies. Hence though it is the most difficult thing in life to resist the first attractions of forbidden pleasures, yet they must be stoutly opposed, or the whole character suffers. Remember the admirable rule of Thales the Milesian, “do not that yourself which you condemn in others.”

*Declina illecebras, et quamvis parcere durum,  
Parce tamen, certæ et caveas auctaria cladis.*

THORIVS.

Now all this “jumble of sighs and joys,” in which we are destined to flounder from the dawn till the sunset of our existence, is according to both reli-

<sup>1</sup> Butler, *Analogy*, &c., Sect. 1, chap. v.



gion and philosophy, nothing more or less than the offspring of moral choice, or that course of conduct or of thought which every one adopts and persists in according to the freedom of his will ; that is to say, every action of your life is voluntary ; and this explains next why the doctrine of human responsibility is one of the earliest and most momentous maxims taught to every Christian—momentous indeed, because it informs you with the solemnity of a prophet's voice that you are answerable to God and society for every thought and every act of your life.<sup>1</sup> And you have seen that these reproduced are the principles of all habits, requiring only reiteration for their perfect establishment in the constitution ; they then become agents destined, and destined by yourselves, to form and direct your conduct. They are imperious or gentle according to their kind. When they are good, you possess in a small and portable compass all the elements of sub-celestial happiness, which will disarm your last moments of their terrors, and secure for you an easy transit through the valley and shadow of death. And surely this is something worth considering to a Christian who knows that this world is not his home. When Anaxagoras was asked if he had no care for his country, he replied, yes, the greatest concern, but it lies yonder, pointing with his fingers to Heaven. When on the contrary they are such as are opposed to the precepts of religion and a pure morality, they poison all the sources of human felicity ; they supplant in the heart the principles of all refined and elevated pleasure ; and, in short, under their tyranny the blessings of life are abused,

<sup>1</sup> “ We are free agents,” says Bishop Butler. “ Our constitution is put in our own power. We are charged with it, and therefore are accountable for every violation of it.”—*Preface to his first three sermons*. “ As matter of fact we are treated by God as free agents, and that is our best proof that we are free.”—*Analogy*, part i. chap. vi.

not enjoyed ; and it is in the nature of things that what affords no enjoyment of which the conscience approves, can afford no happiness. "Peace may be within, but that peace is the stillness of death, and unless a voice from heaven shall awake, the dead the moral being is lost." Beware therefore of placing full reliance on the poet who sings that

"Vice is a monster of such hideous mien  
That to be hated needs but to be seen."

The practical moralist knows the maxim to be fallacious, for that habitual association with the monster not only divests him of his hideousness, but too often renders him an object of desire. Sed assiduitate cotidiana et consuetudine oculorum adsuescunt animi ; neque admirantur, neque requirunt rationes earum rerum, quas semper vident.<sup>1</sup>

<sup>1</sup> *Cic. de Nat. Deorum, ii., 38.*







